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THERMOELECTRIC LEG PRODUCT SPECIFICATION (TELPS) FINAL TECHNICAL REPORT

Volume 1-Technical Results

Part 2

ADVANCED NUCLEAR SYSTEMS OPERATION

GENERAL ELECTRIC

**MISSILE AND SPACE DIVISION
Valley Forge Space Technology Center**

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THERMOELECTRIC LEG PRODUCT SPECIFICATION (TELPS) FINAL TECHNICAL REPORT

Volume 1-Technical Results

Part 2

PREPARED BY: Jonathan Black
J. BLACK, TASK LEADER
ADVANCED NUCLEAR SYSTEMS OPERATION

APPROVED BY: [Signature]
E. HOFFMAN, MANAGER-NUCLEAR SYSTEMS TEST

A. V. Gayuski
A. GAYUSKI, MANAGER-CONTRACT ADMINISTRATION

[Signature]
A. PITROLO, MANAGER-SNAP-27 SYSTEMS

[Signature]
T. WIDMER, MANAGER-SNAP-27 PROG

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ALBUQUERQUE, N.M. 87115

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7. INGRADIENT PERFORMANCE TESTING

A test program was undertaken to determine the steady-state ingradient resistance and voltage characteristics of a large statistical sampling of representative production-type SNAP-27 N- and P-type T/E legs over an extended period of time (> 2000 hours). The purposes of this task was to establish nominal early-life and long-life performance data and, by analysis of various testing conditions and results, determine those performance characteristics and environmental factors which are consistent with long-life.

7.1 DESCRIPTION OF TEST FIXTURES

Refer to Volume 2, Section 3, paragraph 3.1

7.2 SOAK FIXTURE DESCRIPTION

Refer to Volume 2, Section 3, paragraph 3.2

7.3 THERMOCOUPLE CALIBRATION

The Inconel-sheathed, iron-constantan hot and cold junction thermocouples of several fixtures were calibrated against a calibrated standard thermocouple (Figure 7.3-1) which, in turn, had been calibrated against a Bureau of Standards secondary standard. A great deal of difficulty was encountered initially with shorts between thermocouple wires and the sheath in the region of the terminal splice at the fixture base. Various crimping and wire lashing techniques were tried in an attempt to provide a mechanically and electrically secure joint, but these were generally not found to be reliable. Satisfactory joints were finally achieved through application of a combination of vinyl tape wrap for mechanical support, spot welded electrical connections followed by RTV potting of the resultant splice.

All the thermocouples were fabricated from wire stock from the same spools and were found to be in close agreement with each other, but averaged about 8 to 10⁰F too high in indicated temperature in the 1300⁰F range, compared to tabulated values. Thus, to convert thermocouple readings in millivolts (mv) to accurate temperature readings in degrees F, a two-step procedure was adopted. First a fifth order least squares polynomial curve fit expressing temperature as a function of mv readings referred to 32⁰F was established and the 6 coefficients of the power series stored in the appropriate data reduction programs. (See, for example, TELPS 7, Volume 2, Part 4, statement 85).

Figure 7.3-1. Standard Reference Thermocouple 45-6002

A second order polynomial correction curve was then derived to express the average temperature error curve versus mv output. The calculated error for a given mv reading was then algebraically added to these handbook temperature values to give corrected values. Since all thermocouples were referenced to a 150°F controlled reference junction terminal box, it was necessary to first add 1.22 mv to all thermocouple readings to correct to a 32°F reference junction temperature prior to entering the curve fits. The temperature was then calculated by:

$$T = A_0 + A_1 (mv) + A_2 (mv)^2 + \dots + A_5 (mv)^5$$

(See COMPAR, Volume 2, Part 4). It is estimated that this procedure gives temperature values accurate to within ±2°F or about 0.15 percent, whereas ASA "J" standards, to which the thermocouples were produced, result in a possible 0.75 percent accuracy band.

7.4 GEOMETRY CORRECTIONS OF RESISTANCE MEASUREMENTS

The TELPS ingradient performance fixture is essentially a four-probe (two-current and two-potential) resistivity measuring device of special design to permit measurements to be made under one-dimensional temperature gradient conditions. Two Inconel-sheathed, iron-constantan thermocouples are compressively loaded against opposite ends of the test specimen along its central axis. The iron wires of each thermocouple are used as potential probes. The flat graphite current electrodes are provided with an axial hole 0.090-inch in diameter through which the 0.065-inch-diameter thermocouples pass without touching. Insulating sleeves help insure that the thermocouples (and thus the potential probes) do not short out against the current electrode.

7.5 CALCULATION OF VOLTAGE PROFILES IN THERMOELECTRIC ELEMENTS

7.5.1 MATHEMATICAL MODEL FOR CALCULATIONS

The current electrodes contact the thermoelectric legs in such a way that the current flows axially and radially in the cylindrical element, but no angular current flow exists. By defining the voltage distribution within the leg for a particular electrode and leg configuration, it is possible to devise a correction factor for the measured resistance. If we assume homogeneous contact between the electrode and the leg, the voltage distribution within the leg may be calculated by the following procedure.

The leg is assumed to consist of uniform toroidal segments, as shown in Figure 7.5.1-1, which shows a cross section of a leg in a plan including the cylindrical axis of the element. Under steady current flow in the leg, the net amount of electrical current flowing into each toroidal element must be zero. Therefore, we may write a current balance for each segment of the leg.

If we consider Segment Number 1 in Figure 7.5.1-1, the amount of current it receives from each of the surrounding segments is given by the following equations:

The current between Segments 2 and 1 is

$$I_{2-1} = \frac{1}{\rho} \cdot \frac{A}{L} \cdot \Delta E_{2-1}$$

where:

ρ = resistivity of the element

A = area = $2\pi (r_1 - \Delta r) \cdot \Delta L$

L = length = Δr

ΔE_{2-1} = voltage drop between 2 and 1

Therefore,

$$I_{2-1} = \frac{1}{\rho} \cdot \frac{2\pi \Delta L}{\Delta r} (r_1 - \Delta r) (E_2 - E_1) \quad (7-1)$$

The current between 3 and 1 is

$$I_{3-1} = \frac{1}{\rho} \cdot \frac{2\pi r \cdot \Delta r}{\Delta L} (E_3 - E_1) \quad (7-2)$$

The current between 4 and 1 is

$$I_{4-1} = \frac{1}{\rho} \cdot \frac{2\pi \cdot \Delta L}{\Delta r} (r_1 + \Delta r) (E_4 - E_1) \quad (7-3)$$

The current between 5 and 1 is

$$I_{5-1} = \frac{1}{\rho} \cdot \frac{2\pi r \cdot \Delta r}{\Delta L} (E_5 - E_1) \quad (7-4)$$

Figure 7.5.1-1. Cross Section of a Leg Divided into Segments. Electrode Hole Diameter = 0.090-Inch, Leg Length = 0.400-Inch, and Leg Diameter = 0.247-Inch

0.15416	0.15030	0.10639	0	0	0	0	0
0.21367	0.21269	0.20245	0.18499	0.17202	0.16312	0.15783	0.15598
0.30348	0.30324	0.30071	0.29631	0.29152	0.28737	0.28454	0.28348
0.40078	0.40072	0.40006	0.39887	0.39742	0.39605	0.39506	0.39468
0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000	0.50000
0.59922	0.59929	0.59994	0.60113	0.60258	0.60395	0.60494	0.60532
0.69652	0.69677	0.69929	0.70369	0.70848	0.71263	0.71546	0.71652
0.78633	0.78731	0.79755	0.81501	0.82798	0.83688	0.84217	0.84402
0.84585	0.84970	0.89361	1.00000	1.00000	1.00000	1.00000	1.00000

Figure 7.5.1-2. Potential Profile for the Section of Leg Illustrated in Figure 7.5.1-1. The Center Line of the Leg is on the Left. A 1 Volt Potential Difference Between Current Electrodes has been Assumed.

Summing of the above equations gives a current balance for Segment Number 1. That is,

$$I_{2-1} + I_{3-1} + I_{4-1} + I_{5-1} = 0 \quad (7-5)$$

Inspection of the four equations above shows that $1/\rho$ and $2 \cdot \pi$ occur in all equations and may be dropped. Therefore, Equation 7-5 becomes:

$$\begin{aligned} \frac{\Delta L}{\Delta r} (r_1 - \Delta r) (E_2 - E_1) + \frac{r \Delta r}{\Delta L} (E_3 - E_1) + \frac{\Delta L}{\Delta r} (r_1 + \Delta r) (E_4 - E_1) \\ + \frac{\Delta r}{\Delta L} (E_5 - E_1) = 0 \end{aligned} \quad (7-6)$$

Similar equations may be written for each segment of the element including the boundaries. A series of simultaneous equations is obtained which may be solved by relaxation procedures or matrix inversion.

An alternate method of determining the voltage distribution in the element is to assume a voltage distribution of some initial time and then calculate the voltage change for each segment as a function of time using finite difference techniques. This calculation is performed for each segment until a steady-state is reached.

When the finite difference method is used, the right side of Equation 7-5 represents the rate of change of electrical content and becomes:

$$\frac{\Delta q_1}{\Delta t} = \frac{C \cdot V \cdot \Delta E_1}{\Delta t} \quad (7-7)$$

where:

Δq_1 = increase in current content in Segment 1

C = capacitance

V = volume of segment = $2\pi r_1 \cdot \Delta L \cdot \Delta r$

Δt = time increment

ΔE_1 = voltage change over time interval = $E_1' - E_1$

Equation 7-7 then becomes:

$$\frac{\Delta q_1}{\Delta t} = C \cdot 2\pi r_1 \cdot \Delta L \cdot \Delta r \cdot \frac{(E_1' - E_1)}{\Delta t} \quad (7-8)$$

Equation 7-8 is combined with Equations 7-1 through 7-4 to give a current balance for Segment 1. Similar equations may be written for all segments of the element as was indicated above. The voltage change is then calculated for each segment over succeeding time intervals until a steady-state voltage is reached.

This second method was used in calculating the voltage distribution for the thermoelectric elements. The above equations are analogous to the equations for heat transfer in cylinders. Therefore, a computer program which had been used for the calculation of heat transfer in cylinders was used for these calculations.

In the actual calculations, the use of a calculation method for non-steady state would require a very long time to reach steady-state conditions. However, it has been found in previous work that, for systems which are approaching steady-state, when $\Delta E/\Delta t$ is plotted versus E and then extrapolated to $\Delta E/\Delta t = 0$, a good estimate of the steady-state value of E is obtained. With a computer, it is relatively easy to store values of $\Delta E/\Delta t$ and E at selected times and perform the linear extrapolation mathematically. After the extrapolation, the finite difference calculation may be continued for several more time increments to confirm that steady-state conditions have been determined. When the finite difference method, that is, non-steady state technique, is used in conjunction with the extrapolation technique, the computer time required to calculate steady-state voltages is on the same order of magnitude as the time required for matrix inversion or relaxation methods.

It is thus obvious that a resistance calculation based on the usual relation, $R = (E-V)/I$, would be in error because of the nonuniform potential distribution near the electrodes. A correction factor was derived by first obtaining by a computer-coded relaxation method an accurate potential map for an assumed potential difference of 1 volt. By finding the ratio of the measured voltage gradient $(E-V)/L$ to the average gradient near the center of the test specimen, we obtained the factor by which the measured voltage gradient yields too low an indication of the average voltage gradient in a region of the specimen where the current density is uniform. Figure 7.5.1-3 shows the potential profile as a function of radius and distance along length for a test specimen 0.207-inch in diameter and 0.4-inch long, where the

Figure 7.5.1-3. Potential Profile as a Function of Effective Leg Radius r

electrode hole diameter is 0.089 inch. The resistance correction factor is then given by the ratio of the average gradient (indicated by the asymptotic value of the solid traces) to the apparent gradient indicated by the dashed line. Or

$$R = \left(\frac{E-V}{I} \right) \times 1.17847$$

It was found that the magnitude of this correction factor was not very sensitive to changes in leg diameter or small changes in length. A pronounced dependence on electrode hole diameter, however, was observed and the general shape of this dependency is shown in Figure 7.5.1-4. A practical lower limit to this correction factor is probably on the order of 1.05 at a hole diameter of 0.040 inch, providing suitable thermocouple crimping and support fittings can be fabricated to fit 0.020-inch-diameter sheathed thermocouples—the smallest commercially available.

7.6 LATERAL HEAT LOSS CORRECTION

The ingradient performance fixture design provides a thermal environment which favors one-dimensional heat flow in the test specimen as a consequence of the large temperature gradient and large area isothermal hot block and cold block surfaces which tend to reduce lateral radiation heat loss. Nevertheless, gas convection heat losses, as well as some radiation loss through the quartz tube, produce sufficient changes in the thermal gradient to cause a detectable change in resistance from that observed when such thermal losses are effectively eliminated by insertion of microquartz insulation into the vacant region surrounding the legs between the heater blocks. To compensate for this effect when legs are tested without this insulation, an additional empirically determined resistance correction coefficient of 3 percent is required at $T_h = 1090$ and $T_c = 520^\circ\text{F}$. To a first approximation, the magnitude of this correction is assumed proportional to the average leg temperature. Thus, the final form for the expression used to calculate leg resistance in an ingradient performance fixture is

$$R = \left(\frac{E-V}{I} \right) \times 1.17847 \times 1.03 \left(\frac{T_h + T_c}{1090 + 520} \right)$$

Figure 7.5.1-4. Resistance Correction Factor for TELPS IG Fixture

7.7 TEST RESULTS OF TASK 3-PERFORMANCE TESTING

Reduced data in the form of actual hot and cold junction temperatures, normalized values of resistance, Seebeck voltage, and power, and cumulative operation time were sorted according to task, sample number, nominal hot junction temperature, and time. Tabulated and plotted results of these measurements appear on the following pages. Temperature control with short cycle periods proved to be a major problem. In addition, to preserve the life of the heaters, it became necessary to drop the nominal 1350°F hot junction temperature to nominally 1300°F. Normalization of the data back to 1350°F often resulted in a correction factor on power in excess of 10 percent. These occasions for operating times in excess of ~1500 hours are so noted.*

The test matrix, Figure 7.7-1, provided four intervals of time of approximately 48 hours duration each, separated by much longer periods of time during which the legs were stored in a temperature gradient in one of the soak fixtures.** To facilitate subsequent analysis of variance studies, average values of each of the operational parameters for each leg in each test segment were calculated and appear in the tabulated results.

* A power correction factor "0.0" means either (a) the factor was not calculated, that is, $t < 1500$ hours or (b) the power correction factor lies between 0.9 and 1.1.

** Total Time entry on section content pages is the period for which data is shown. Times listed on computer output are actual elapsed test times.

7.7.1 PERFORMANCE TEST DATA

LOT 9 - N-TYPE

$T_H = 1090^{\circ}\text{F}$

$T_C = 520^{\circ}\text{F}$

BATCH	SAMPLE	TOTAL TIME (HR)	FIGURE NUMBER
4B	927	2188	7.7.1-1
	928	2212	7.7.1-2
	929	2212	7.7.1-3
6A	927	2212	7.7.1-4
	928	2212	7.7.1-5
	929	2212	7.7.1-6
7B	927	2212	7.7.1-7
	928	2212	7.7.1-8
	929	572	7.7.1-9
11B	27	2305	7.7.1-10
	28	2305	7.7.1-11
	29	2305	7.7.1-12
14A	27	2305	7.7.1-13
	28	2305	7.7.1-14
	29	2305	7.7.1-15

Figure 7.7.1-1. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 4B-927		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
4	1094.89990	503.39990	12.81000	66.42999	0.08610	400.38281	0.0
4	1094.89990	503.39990	12.81000	66.42999	0.08610	400.38281	0.0
4	1076.79980	502.79980	12.76000	66.51999	0.08670	403.78296	0.0
4	1078.29980	501.50000	12.74000	66.45999	0.08670	407.78296	0.0
4	1078.89990	500.19995	12.72000	66.34999	0.08650	411.78296	0.0
4	1079.89990	500.50000	12.68000	66.39000	0.08690	415.78296	0.0
4	1079.59985	500.50000	12.66000	66.37999	0.08700	417.08276	0.0
2	1069.69995	504.09985	12.35000	65.54999	0.08700	1600.79980	0.0
2	1063.50000	503.29980	12.40000	65.60999	0.08680	1602.79980	0.0
2	1059.59985	503.09985	12.46000	65.68999	0.08660	1606.79980	0.0
2	1059.59985	503.69995	12.47000	65.73000	0.08660	1610.79980	0.0
2	1061.50000	505.09985	12.50000	65.75999	0.08650	1614.79980	0.0
2	1068.39990	509.39990	12.46000	66.06000	0.08750	1622.79980	0.0
2	1072.79980	512.79980	12.49000	66.10999	0.08750	1626.79980	0.0
2	1076.29980	514.79980	12.47000	66.12000	0.08760	1630.79980	0.0
2	1081.09985	520.59985	12.47000	66.15999	0.08770	1634.79980	0.0
2	1084.00000	518.69995	12.46000	66.17999	0.08790	1638.79980	0.0
2	1089.00000	520.79980	12.45000	66.21999	0.08800	1642.79980	0.0
2	1092.09985	518.09985	12.44000	66.23999	0.08810	1646.79980	0.0
2	1093.89990	516.69995	12.43000	66.25000	0.08830	1650.79980	0.0
2	1094.59985	517.50000	12.44000	66.28000	0.08830	1654.79980	0.0
2	1096.39990	518.89990	12.44000	66.28999	0.08830	1658.79980	0.0
2	1097.79980	519.39990	12.43000	66.25999	0.08830	1662.79980	0.0
2	1098.89990	520.89990	12.43000	66.31999	0.08840	1666.46997	0.0
2	1125.09985	535.79980	11.81000	65.87999	0.09190	2167.71948	0.0
2	1101.89990	532.09985	11.93000	65.87000	0.09090	2187.72046	0.0

AVERAGE VALUES

9- 4B-927						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
233 - 1045	12.73999	66.42278	0.08657	408.13989	7	
1045 - 1885	12.44646	66.04871	0.08761	1633.71899	17	
1885 - 2400	11.87000	65.87498	0.09140	2177.71875	2

Figure 7.7.1-2. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-2. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 48-928		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	P. FACTOR
4	1049.00000	518.50000	12.92000	70.48999	0.09610	10.55000	0.0
4	1040.00000	519.09985	13.02000	71.51999	0.09820	14.55000	0.0
4	1040.09985	518.89990	13.00000	71.50000	0.09830	16.54999	0.0
4	1039.69995	518.69995	12.99000	71.81999	0.09930	18.54999	0.0
4	1056.59985	519.50000	12.70000	70.00000	0.09640	22.54999	0.0
4	1056.29980	519.39990	12.69000	70.00999	0.09650	26.54999	0.0
4	1057.19995	519.19995	12.66000	69.89999	0.09650	30.54999	0.0
4	1056.89990	519.19995	12.65000	69.90999	0.09660	34.54999	0.0
6	1060.50000	528.89990	12.65000	70.34000	0.09780	38.54999	0.0
6	1079.19995	522.79980	12.51000	64.07999	0.08210	381.00000	0.0
6	1080.19995	523.09985	12.47000	64.09999	0.08230	383.78296	0.0
6	1086.00000	524.69995	12.46000	64.17000	0.08260	387.78296	0.0
6	1093.69995	526.00000	12.42000	64.12000	0.08280	391.78296	0.0
6	1096.69995	526.59985	12.42000	64.20999	0.08300	393.78296	0.0
6	1081.39990	517.29980	12.43000	64.14999	0.08280	400.38281	0.0
6	1088.19995	520.50000	12.37000	64.18999	0.08330	403.78296	0.0
6	1089.09985	520.19995	12.32000	64.21999	0.08360	407.78296	0.0
6	1088.19995	518.59985	12.36000	64.17999	0.08330	411.78296	0.0
6	1089.09985	518.89990	12.39000	64.18999	0.08310	415.78296	0.0
6	1088.79980	518.89990	12.30000	64.18999	0.08380	417.08276	0.0
4	1080.39990	521.89990	13.06000	65.35999	0.08180	1600.79980	0.0
4	1080.39990	523.00000	13.09000	65.53000	0.08200	1602.79980	0.0
4	1081.59985	523.39990	12.98000	65.53999	0.08270	1606.79980	0.0
4	1083.19995	524.09985	12.95000	65.53999	0.08290	1610.79980	0.0
4	1084.19995	523.50000	12.94000	65.50999	0.08290	1614.79980	0.0
4	1088.69995	523.19995	12.95000	65.43999	0.08270	1622.79980	0.0
4	1090.79980	523.69995	12.91000	65.42999	0.08290	1626.79980	0.0
4	1091.50000	523.09985	12.90000	65.42999	0.08300	1630.79980	0.0
4	1091.79980	523.39990	12.85000	65.42000	0.08330	1634.79980	0.0
4	1091.59985	523.19995	12.87000	65.40999	0.08310	1638.79980	0.0
4	1092.39990	524.19995	12.86000	65.42999	0.08320	1642.79980	0.0
4	1093.39990	524.59985	12.85000	65.40999	0.08320	1646.79980	0.0
4	1094.00000	524.29980	12.84000	65.40999	0.08330	1650.79980	0.0
4	1094.39990	524.29980	12.84000	65.40999	0.08330	1654.79980	0.0
4	1095.19995	525.09985	12.83000	65.40999	0.08340	1658.79980	0.0
4	1095.09985	525.19995	12.82000	65.39999	0.08340	1662.79980	0.0
4	1095.29980	525.50000	12.81000	65.40999	0.08350	1666.46997	0.0
4	1160.59985	567.79980	13.91000	63.81000	0.07320	2167.71948	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
4	1090.50000	522.79980	13.26000	64.18999	0.07770	2187.72046	0.0
4	1086.50000	518.59985	13.20000	64.12000	0.07790	2195.72046	0.0
4	1086.09985	517.69995	13.17000	64.14999	0.07810	2199.71997	0.0
4	1086.19995	517.29980	13.15000	64.09000	0.07810	2203.72070	0.0
4	1087.29980	518.69995	13.14000	64.09999	0.07810	2207.72021	0.0
4	1086.89990	519.00000	13.12000	64.09999	0.07830	2211.72070	0.0

AVERAGE VALUES

9- 48-928 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
0 - 233	12.80888	70.60991	0.09730	23.66109	9
233 - 1045	12.40454	64.16359	0.08297	399.52051	11
1045 - 1885	12.90293	65.44051	0.08298	1633.71899	17
1885 - 2400	13.27857	64.07990	0.07734	2196.29004	7

Figure 7.7.1-3. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-3. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 4B-929		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1098.00000	542.79980	12.35000	66.96999	0.09080	10.55000	0.0
6	1098.29980	543.79980	12.35000	67.01999	0.09090	14.55000	0.0
6	1098.29980	543.69995	12.35000	67.00000	0.09090	16.54999	0.0
6	1097.29980	543.59985	12.35000	67.03999	0.09100	18.54999	0.0
6	1098.00000	545.00000	12.36000	67.07999	0.09100	22.54999	0.0
6	1097.59985	545.29980	12.34000	67.10999	0.09120	26.54999	0.0
6	1097.59985	545.89990	12.34000	67.14000	0.09130	30.54999	0.0
6	1097.79980	546.39990	12.34000	67.14000	0.09140	34.54999	0.0
6	1131.09985	541.39990	12.31000	66.79999	0.09060	41.38329	0.0
6	1134.39990	544.19995	12.29000	66.85999	0.09090	42.54999	0.0
8	1082.00000	515.29980	12.34000	64.50999	0.08430	400.38281	0.0
8	1087.19995	517.00000	12.29000	64.54999	0.08470	403.78296	0.0
8	1095.50000	518.19995	12.23000	64.48999	0.08500	407.78296	0.0
8	1104.09985	517.29980	12.21000	64.28999	0.08460	411.78296	0.0
8	1116.19995	518.89990	12.07000	64.10999	0.08510	415.78296	0.0
8	1119.59985	518.89990	12.07000	64.06000	0.08500	417.08276	0.0
6	1074.79980	525.29980	7.27000	53.48999	0.09840	1600.79980	0.0
6	1068.39990	524.19995	7.83000	54.62000	0.09530	1602.79980	0.0
6	1064.69995	523.09985	8.00000	54.85999	0.09400	1606.79980	0.0
6	1065.89990	523.79980	8.11000	55.01999	0.09330	1610.79980	0.0
6	1068.59985	525.09985	8.18000	55.12999	0.09290	1614.79980	0.0
6	1075.69995	527.39990	8.18000	54.37999	0.09040	1622.79980	0.0
6	1079.29980	528.89990	8.28000	54.56999	0.09000	1626.79980	0.0
6	1082.29980	529.29980	8.28000	54.57999	0.08990	1630.79980	0.0
6	1085.29980	529.79980	8.29000	54.59999	0.08990	1634.79980	0.0
6	1087.29980	529.89990	8.27000	54.59000	0.09010	1638.79980	0.0
6	1089.69995	530.50000	8.28000	54.59000	0.09000	1642.79980	0.0
6	1090.89990	530.39990	8.24000	54.57999	0.09030	1646.79980	0.0
6	1091.39990	529.79980	8.21000	54.59000	0.09070	1650.79980	0.0
6	1091.59985	529.59985	8.21000	54.62000	0.09080	1654.79980	0.0
6	1092.50000	530.39990	8.21000	54.65999	0.09090	1658.79980	0.0
6	1092.29980	530.39990	8.21000	54.71999	0.09120	1662.79980	0.0
6	1092.39990	530.19995	8.40000	55.21999	0.09080	1666.46997	0.0
6	1207.79980	566.00000	9.42000	55.70000	0.08230	2167.71948	0.0
6	1099.19995	503.89990	9.07000	56.10999	0.08670	2187.72046	0.0
6	1085.89990	513.19995	9.13000	56.12999	0.08620	2191.71997	0.0
6	1084.00000	512.89990	9.15000	56.17000	0.08620	2195.72046	0.0
6	1083.19995	512.39990	9.16000	56.23999	0.08640	2199.71997	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1082.79980	511.89990	9.16000	56.29999	0.08650	2203.72070	0.0
6	1083.50000	512.69995	9.18000	56.37000	0.08650	2207.72021	0.0
6	1083.00000	513.19995	9.18000	56.42000	0.08670	2211.72070	0.0

AVERAGE VALUES

9- 4B-929						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.33799	67.01588	0.09100	25.83330	10	
233 - 1045	12.20166	64.33492	0.08478	409.43286	6	
1045 - 1885	8.14411	54.63637	0.09170	1633.71899	17	
1885 - 2400	9.18124	56.17993	0.08594	2195.71875	8

Figure 7.7.1-4. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-4. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 6A-927		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	P. FACTOR
8	1100.79980	513.29980	12.73000	65.98000	0.08550	10.55000	0.0
8	1101.89990	513.09985	12.67000	66.01999	0.08600	14.55000	0.0
8	1101.89990	512.79980	12.65000	66.04999	0.08620	16.54999	0.0
8	1101.69995	512.59985	12.62000	65.98999	0.08620	18.54999	0.0
8	1103.00000	512.39990	12.59000	65.92999	0.08630	22.54999	0.0
8	1102.00000	511.89990	12.59000	65.90999	0.08630	26.54999	0.0
8	1101.29980	511.50000	12.58000	65.95999	0.08650	30.54999	0.0
8	1101.00000	511.50000	12.56000	65.98000	0.08660	34.54999	0.0
8	1054.79980	512.79980	12.60000	66.29999	0.08720	38.54999	0.0
8	1114.69995	539.29980	12.51000	66.75000	0.08900	41.38329	0.0
8	1115.89990	540.59985	12.50000	66.79999	0.08920	42.54999	0.0
10	1042.79980	526.29980	12.54000	65.07999	0.08440	381.00000	0.0
10	1032.79980	525.29980	12.53000	65.20999	0.08480	383.78296	0.0
10	1028.39990	525.29980	12.49000	65.28000	0.08530	387.78296	0.0
10	1027.79980	525.29980	12.43000	65.31000	0.08580	391.78296	0.0
10	1029.09985	526.00000	12.43000	65.28999	0.08570	393.78296	0.0
10	1087.79980	514.39990	12.30000	64.31000	0.08400	400.38281	0.0
10	1092.39990	514.69995	12.24000	64.26999	0.08440	403.78296	0.0
10	1106.50000	517.00000	12.21000	64.25999	0.08450	407.78296	0.0
10	1122.29980	517.89990	12.17000	64.06000	0.08430	411.78296	0.0
10	1139.59985	519.19995	12.06000	63.84999	0.08450	415.78296	0.0
10	1143.50000	518.89990	12.04000	63.76999	0.08440	417.08276	0.0
8	1047.09985	500.00000	12.13000	62.56999	0.08070	1600.79980	0.0
8	1040.19995	499.39990	12.16000	62.56000	0.08050	1602.79980	0.0
8	1031.29980	498.00000	12.21000	62.73000	0.08060	1606.79980	0.0
8	1029.39990	498.09985	12.19000	62.75999	0.08080	1610.79980	0.0
8	1028.19995	498.00000	12.19000	62.82999	0.08090	1614.79980	0.0
8	1029.29980	498.79980	12.05000	62.82999	0.08190	1622.79980	0.0
8	1032.79980	501.00000	12.04000	62.84000	0.08200	1626.79980	0.0
8	1031.69995	499.89990	12.04000	62.84000	0.08200	1630.79980	0.0
8	1036.09985	501.69995	12.02000	62.87999	0.08220	1638.79980	0.0
8	1035.39990	502.19995	12.02000	62.84999	0.08210	1642.79980	0.0
8	1037.29980	502.69995	12.01000	62.87999	0.08230	1646.79980	0.0
8	1040.50000	503.59985	11.99000	62.89999	0.08250	1650.79980	0.0
8	1050.19995	505.89990	12.02000	62.87999	0.08230	1654.79980	0.0
8	1054.19995	507.50000	11.99000	62.87000	0.08240	1658.79980	0.0
8	1057.50000	508.39990	11.98000	62.87999	0.08250	1662.79980	0.0
8	1059.19995	507.89990	11.96000	62.90999	0.08280	1666.46997	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1093.89990	513.39990	12.01000	62.50000	0.08130	2187.72046	0.0
8	1089.89990	516.50000	12.01000	62.50999	0.08130	2191.71997	0.0
8	1091.19995	516.19995	11.99000	62.53000	0.08150	2195.72046	0.0
8	1091.50000	515.29980	11.97000	62.51999	0.08160	2199.71997	0.0
8	1090.29980	514.09985	11.95000	62.53999	0.08180	2203.72070	0.0
8	1090.09985	514.50000	11.94000	62.53000	0.08180	2207.72021	0.0
8	1091.00000	515.50000	11.93000	62.50999	0.08190	2211.72070	0.0

AVERAGE VALUES

9- 6A-927						
TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA	
0 - 233	12.59999	66.15173	0.08682	26.98936	11	
233 - 1045	12.31272	64.60803	0.08474	399.52051	11	
1045 - 1885	12.06249	62.81303	0.08178	1633.65186	16	
1885 - 2400	11.97142	62.51991	0.08160	2199.71875	7

Figure 7.7.1-5. TELPS Leg Performance Data Normalized to $TH = 1090$ (F) $TC = 520$ (F)

TABLE 7.7.1-5. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 6A-928		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1086.59985	524.19995	12.66000	67.06999	0.08880	10.55000	0.0
10	1087.00000	524.69995	12.62000	67.09999	0.08920	14.55000	0.0
10	1087.00000	524.69995	12.59000	67.10999	0.08940	16.54999	0.0
10	1087.50000	524.89990	12.57000	67.10999	0.08960	18.54999	0.0
10	1088.09985	525.59985	12.57000	67.15999	0.08970	22.54999	0.0
10	1088.00000	525.69995	12.53000	67.14999	0.08990	26.54999	0.0
10	1088.19995	525.50000	12.53000	67.15999	0.09000	30.54999	0.0
10	1087.89990	525.69995	12.52000	67.15999	0.09010	34.54999	0.0
10	1067.89990	509.19995	12.54000	66.76999	0.08880	38.54999	0.0
10	1105.59985	532.69995	12.47000	67.29999	0.09080	41.38329	0.0
10	1107.09985	534.00000	12.46000	67.32999	0.09090	42.54999	0.0
12	1067.79980	536.59985	12.29000	65.04999	0.08610	381.00000	0.0
12	1064.09985	536.00000	12.22000	64.95000	0.08630	383.78296	0.0
12	1066.00000	537.00000	12.14000	64.87000	0.08670	387.78296	0.0
12	1071.89990	538.59985	12.07000	64.84000	0.08710	391.78296	0.0
12	1076.50000	539.50000	11.98000	64.75999	0.08750	393.78296	0.0
12	1046.79980	465.79980	12.07000	62.23999	0.08020	400.38281	0.0
12	1094.29980	502.50000	11.92000	63.07999	0.08340	403.78296	0.0
12	1102.79980	502.79980	11.81000	62.95000	0.08390	407.78296	0.0
12	1106.19995	502.50000	11.78000	62.89000	0.08390	411.78296	0.0
12	1107.69995	503.39990	11.73000	62.85999	0.08430	415.78296	0.0
12	1107.39990	503.09985	11.72000	62.81999	0.08420	417.08276	0.0
10	1071.69995	510.39990	11.58000	61.93999	0.08290	1600.79980	0.0
10	1064.39990	508.79980	11.62000	62.03000	0.08280	1602.79980	0.0
10	1059.79980	507.69995	11.65000	62.09000	0.08270	1606.79980	0.0
10	1060.79980	508.39990	11.64000	62.03999	0.08270	1610.79980	0.0
10	1063.00000	508.79980	11.64000	62.06000	0.08270	1614.79980	0.0
10	1070.59985	511.00000	11.55000	62.09999	0.08350	1622.79980	0.0
10	1074.79980	512.59985	11.55000	62.12999	0.08360	1626.79980	0.0
10	1078.59985	513.59985	11.55000	62.14000	0.08360	1630.79980	0.0
10	1082.39990	514.00000	11.53000	62.15999	0.08370	1634.79980	0.0
10	1086.09985	514.50000	11.53000	62.17999	0.08380	1638.79980	0.0
10	1090.09985	515.39990	11.52000	62.20000	0.08400	1642.79980	0.0
10	1092.39990	515.59985	11.53000	62.26999	0.08410	1646.79980	0.0
10	1094.29980	515.00000	11.51000	62.25000	0.08420	1650.79980	0.0
10	1095.39990	514.59985	11.50000	62.23999	0.08420	1654.79980	0.0
10	1096.59985	514.59985	11.51000	62.25000	0.08420	1658.79980	0.0
10	1096.69995	514.50000	11.50000	62.25000	0.08420	1662.79980	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1097.00000	514.39990	11.49000	62.25000	0.08430	1666.46997	0.0
10	1170.19995	552.69995	11.34000	62.09000	0.08500	2167.71948	0.0
10	1085.00000	508.79980	11.20000	62.04999	0.08590	2187.72046	0.0
10	1080.09985	511.29980	11.23000	62.06000	0.08570	2191.71997	0.0
10	1079.00000	510.79980	11.23000	62.06999	0.08580	2195.72046	0.0
10	1078.59985	510.19995	11.22000	62.07999	0.08590	2199.71997	0.0
10	1078.39990	509.69995	11.22000	62.07999	0.08590	2203.72070	0.0
10	1079.00000	510.39990	11.22000	62.09000	0.08590	2207.72021	0.0
10	1079.00000	511.39990	11.22000	62.09999	0.08590	2211.72070	0.0

AVERAGE VALUES						
9- 6A-928						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.55090	67.12898	0.08975	26.98936	11	
233 - 1045	11.97545	63.75537	0.08487	399.52051	11	
1045 - 1885	11.55294	62.15170	0.08360	1633.71899	17	
1885 - 2400	11.23499	62.07742	0.08575	2195.71875	8

Figure 7.7.1-6. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

9 - 6 A - 929

TABLE 7.7.1-6. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 6A-929		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	P. FACTOR
12	1057.39990	568.19995	12.76000	68.34000	0.09150	10.55000	0.0
12	1074.79980	568.09985	12.57000	68.26999	0.09270	14.55000	0.0
12	1074.79980	568.09985	12.57000	68.26999	0.09270	16.54999	0.0
12	1077.89990	565.39990	12.50000	68.20000	0.09310	18.54999	0.0
12	1081.50000	565.79980	12.47000	68.18999	0.09320	22.54999	0.0
12	1083.29980	566.39990	12.42000	68.20999	0.09360	26.54999	0.0
12	1085.29980	567.19995	12.40000	68.23000	0.09390	30.54999	0.0
12	1086.19995	567.39990	12.38000	68.23999	0.09400	34.54999	0.0
12	1096.19995	540.19995	12.38000	67.40999	0.09170	38.54999	0.0
12	1036.79980	520.79980	12.43000	67.17999	0.09070	41.38329	0.0
12	1035.69995	520.09985	12.44000	67.17000	0.09070	42.54999	0.0
14	1091.79980	509.19995	12.37000	65.21999	0.08600	400.38281	0.0
14	1090.59985	508.89990	12.29000	65.18999	0.08650	403.78296	0.0
14	1107.09985	510.79980	12.28000	65.12999	0.08640	407.78296	0.0
14	1125.39990	510.19995	12.24000	64.92999	0.08610	411.78296	0.0
14	1143.79980	507.00000	12.10000	64.54999	0.08610	415.78296	0.0
14	1145.89990	506.29980	12.12000	64.51999	0.08590	417.08276	0.0
12	1077.59985	503.09985	12.68000	62.35999	0.07660	1600.79980	0.0
12	1074.39990	503.09985	12.67000	62.43999	0.07700	1602.79980	0.0
12	1071.00000	502.00000	12.66000	62.45000	0.07700	1606.79980	0.0
12	1071.00000	502.00000	12.66000	62.45000	0.07700	1610.79980	0.0
12	1074.39990	503.39990	12.62000	62.45000	0.07720	1614.79980	0.0
12	1080.89990	505.69995	12.56000	62.84000	0.07860	1622.79980	0.0
12	1084.50000	507.09985	12.54000	62.87000	0.07880	1626.79980	0.0
12	1087.09985	507.29980	12.52000	62.85999	0.07890	1630.79980	0.0
12	1089.50000	507.19995	12.51000	62.87000	0.07900	1634.79980	0.0
12	1091.09985	506.69995	12.50000	62.87000	0.07900	1638.79980	0.0
12	1092.59985	506.69995	12.49000	62.87000	0.07920	1642.79980	0.0
12	1093.50000	506.69995	12.48000	62.87000	0.07920	1646.79980	0.0
12	1094.00000	506.19995	12.47000	62.87999	0.07930	1650.79980	0.0
12	1094.19995	505.89990	12.47000	62.87000	0.07930	1654.79980	0.0
12	1094.79980	506.19995	12.47000	62.87000	0.07930	1658.79980	0.0
12	1094.89990	506.50000	12.47000	62.87000	0.07930	1662.79980	0.0
12	1095.09985	506.39990	12.39000	62.92999	0.07990	1666.46997	0.0
12	1164.79980	579.69995	12.34000	62.45999	0.07900	2167.71948	0.0
12	1088.79980	522.39990	12.19000	62.37000	0.07980	2187.72046	0.0
12	1087.00000	520.50000	12.20000	62.37999	0.07980	2191.71997	0.0
12	1088.29980	519.50000	12.18000	62.37999	0.07990	2195.72046	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
12	1089.39990	518.89990	12.17000	62.37000	0.07990	2199.71997	0.0
12	1090.39990	518.50000	12.16000	62.37000	0.08000	2203.72070	0.0
12	1091.69995	519.29980	12.16000	62.37000	0.08000	2207.72021	0.0
12	1091.79980	520.09985	12.13000	62.37999	0.08020	2211.72070	0.0

AVERAGE VALUES

9- 6A-929						
TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA	
0 - 233	12.48363	67.97359	0.09253	26.98936	11	
233 - 1045	12.23333	64.92322	0.08617	409.43286	6	
1045 - 1885	12.53882	62.74225	0.07851	1633.71899	17	
1885 - 2400	12.19124	62.38495	0.07982	2195.71875	8

Figure 7.7.1-7. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-7. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 7B-927		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1082.00000	530.79980	12.74000	67.26999	0.08880	10.55000	0.0
14	1082.50000	531.09985	12.68000	67.28999	0.08920	14.55000	0.0
14	1083.00000	531.89990	12.66000	67.29999	0.08940	16.54999	0.0
14	1083.59985	531.50000	12.63000	67.29999	0.08960	18.54999	0.0
14	1083.79980	531.89990	12.61000	67.32999	0.08990	22.54999	0.0
14	1083.59985	532.19995	12.59000	67.34000	0.09000	26.54999	0.0
14	1083.89990	533.09985	12.58000	67.37000	0.09020	30.54999	0.0
14	1083.59985	533.00000	12.57000	67.35999	0.09020	34.54999	0.0
14	1081.59985	511.39990	12.56000	66.70000	0.08860	38.54999	0.0
14	1097.00000	525.69995	12.51000	67.09999	0.09000	41.38329	0.0
14	1097.29980	526.59985	12.51000	67.14999	0.09010	42.54999	0.0
16	1102.79980	536.59985	12.52000	65.64999	0.08610	400.38281	0.0
16	1076.19995	505.00000	12.47000	64.81999	0.08420	403.78296	0.0
16	1086.59985	505.00000	12.39000	64.71999	0.08450	407.78296	0.0
16	1098.29980	505.00000	12.35000	64.62999	0.08450	411.78296	0.0
16	1109.59985	504.69995	12.28000	64.50000	0.08470	415.78296	0.0
16	1110.79980	503.39990	12.25000	64.39999	0.08470	417.08276	0.0
14	1055.59985	492.69995	12.62000	63.48000	0.07980	1600.79980	0.0
14	1051.69995	492.29980	12.60000	63.59999	0.08020	1602.79980	0.0
14	1049.59985	491.79980	12.56000	63.71999	0.08080	1606.79980	0.0
14	1051.79980	493.19995	12.54000	63.81999	0.08120	1610.79980	0.0
14	1055.00000	494.29980	12.51000	63.84999	0.08150	1614.79980	0.0
14	1063.59985	497.19995	12.39000	64.42999	0.08370	1622.79980	0.0
14	1068.19995	498.79980	12.37000	64.45000	0.08400	1626.79980	0.0
14	1071.50000	498.89990	12.33000	64.45000	0.08420	1630.79980	0.0
14	1074.39990	499.00000	12.32000	64.45999	0.08430	1634.79980	0.0
14	1077.09985	498.79980	12.28000	64.45999	0.08460	1642.79980	0.0
14	1078.09985	499.09985	12.26000	64.45000	0.08470	1646.79980	0.0
14	1078.09985	498.39990	12.24000	64.43999	0.08480	1650.79980	0.0
14	1078.00000	498.19995	12.21000	64.43999	0.08500	1654.79980	0.0
14	1078.69995	498.69995	12.19000	64.43999	0.08510	1658.79980	0.0
14	1078.59985	499.09985	12.18000	64.45999	0.08530	1662.79980	0.0
14	1078.79980	499.39990	12.16000	64.48000	0.08550	1666.46997	0.0
14	1178.19995	581.00000	12.04000	64.45999	0.08630	2167.71948	0.0
14	1083.09985	515.09985	11.75000	64.37999	0.08820	2187.72046	0.0
14	1083.09985	515.29980	11.78000	64.37999	0.08800	2191.71997	0.0
14	1082.79980	515.29980	11.78000	64.39999	0.08800	2195.72046	0.0
14	1081.89990	514.29980	11.77000	64.39999	0.08810	2199.71997	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1081.39990	513.89990	11.77000	64.40999	0.08810	2203.72070	0.0
14	1081.89990	514.59985	11.77000	64.42000	0.08820	2207.72021	0.0
14	1081.59985	515.29980	11.76000	64.40999	0.08820	2211.72070	0.0

AVERAGE VALUES						
9- 7B-927	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	12.60363	67.22809	0.08964	26.98936	11	
233 - 1045	12.37666	64.78662	0.08478	409.43286	6	
1045 - 1885	12.35999	64.21432	0.08342	1633.40186	16	
1885 - 2400	11.80249	64.40744	0.08789	2195.71875	8

Figure 7.7.1-8. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-8. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 7B-928		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	P. FACTOR
16	1070.59985	542.29980	13.08000	67.78000	0.08780	10.55000	0.0
16	1080.09985	542.39990	12.92000	67.75000	0.08890	14.55000	0.0
16	1088.50000	543.09985	12.84000	67.73999	0.08940	16.54999	0.0
16	1095.39990	543.29980	12.78000	67.73999	0.08980	18.54999	0.0
16	1103.79980	542.79980	12.67000	67.73999	0.09050	22.54999	0.0
16	1107.09985	541.89990	12.59000	67.68999	0.09100	26.54999	0.0
16	1108.59985	543.00000	12.55000	67.67999	0.09120	30.54999	0.0
16	1108.00000	542.59985	12.52000	67.70000	0.09150	34.54999	0.0
16	1115.59985	537.69995	12.48000	67.51999	0.09130	41.38329	0.0
16	1118.39990	540.59985	12.47000	67.57999	0.09160	42.54999	0.0
20	1045.89990	495.09985	12.59000	66.28999	0.08730	381.00000	0.0
20	1050.19995	496.00000	12.60000	66.34000	0.08730	383.78296	0.0
20	1057.29980	496.69995	12.60000	66.37000	0.08740	387.78296	0.0
20	1059.79980	496.69995	12.57000	66.40999	0.08770	391.78296	0.0
20	1056.09985	499.59985	12.65000	66.56999	0.08750	393.78296	0.0
20	1084.79980	514.69995	12.55000	66.92999	0.08920	400.38281	0.0
20	1085.09985	516.00000	12.54000	67.00000	0.08950	403.78296	0.0
20	1085.09985	516.00000	12.51000	67.03000	0.08980	407.78296	0.0
20	1084.50000	515.29980	12.51000	67.00000	0.08970	411.78296	0.0
20	1084.19995	515.29980	12.52000	67.00999	0.08960	415.78296	0.0
20	1083.50000	514.69995	12.53000	66.96999	0.08950	417.08276	0.0
16	1077.50000	505.09985	12.27000	64.64999	0.08510	1600.79980	0.0
16	1074.79980	505.39990	12.26000	64.68999	0.08530	1602.79980	0.0
16	1073.59985	505.00000	12.26000	64.67999	0.08530	1606.79980	0.0
16	1075.29980	505.09985	12.24000	64.65999	0.08540	1610.79980	0.0
16	1077.39990	505.19995	12.22000	64.62999	0.08550	1614.79980	0.0
16	1082.79980	506.39990	12.17000	65.00999	0.08690	1622.79980	0.0
16	1081.50000	505.39990	12.15000	65.00999	0.08690	1626.79980	0.0
16	1083.09985	505.19995	12.15000	65.00999	0.08700	1630.79980	0.0
16	1084.29980	505.50000	12.13000	65.00000	0.08710	1634.79980	0.0
16	1084.19995	504.59985	12.13000	64.98999	0.08700	1638.79980	0.0
16	1085.29980	505.50000	12.12000	65.00000	0.08710	1642.79980	0.0
16	1085.89990	505.39990	12.12000	64.98999	0.08710	1646.79980	0.0
16	1086.29980	504.79980	12.12000	64.98999	0.08710	1650.79980	0.0
16	1086.39990	504.50000	12.13000	64.98000	0.08700	1654.79980	0.0
16	1087.50000	505.59985	12.11000	64.98000	0.08720	1658.79980	0.0
16	1087.50000	506.00000	12.11000	64.98000	0.08710	1662.79980	0.0
16	1088.59985	506.69995	12.18000	64.98999	0.08670	1666.46997	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
16	1137.09985	565.39990	11.67000	64.49999	0.08910	2187.71948	0.0
16	1088.39990	532.00000	11.67000	64.50000	0.08910	2187.72046	0.0
16	1089.59985	526.69995	11.70000	64.50999	0.08890	2191.71997	0.0
16	1095.19995	527.59985	11.71000	64.50000	0.08890	2195.72046	0.0
16	1102.29980	528.69995	11.71000	64.53000	0.08890	2199.71997	0.0
16	1109.89990	529.19995	11.71000	64.56999	0.08900	2203.72070	0.0
16	1120.79980	530.29980	11.69000	64.50999	0.08900	2207.72021	0.0
16	1129.89990	530.50000	11.68000	64.64000	0.08940	2211.72070	0.0

AVERAGE VALUES

9- 7B-928 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
0 - 233	12.68999	67.69191	0.09030	25.83330	10
233 - 1045	12.56090	66.71992	0.08859	399.52051	11
1045 - 1885	12.16882	64.89641	0.08652	1633.71899	17
1885 - 2400	11.69249	64.52740	0.08904	2195.71875	8

Figure 7.7.1-9. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-9. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 7B-929		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
2	1059.19995	512.39990	12.95000	65.98999	0.08400	1733.39990	0.0
2	1047.79980	511.29980	13.03000	66.00999	0.08360	1737.39990	0.0
2	1045.09985	511.09985	13.06000	66.03000	0.08350	1741.39990	0.0
2	1044.50000	512.29980	13.07000	66.03999	0.08340	1745.39990	0.0
2	1045.79980	511.69995	13.18000	66.06999	0.08280	1749.39990	0.0
2	1068.89990	519.09985	13.21000	66.07999	0.08260	1753.39990	0.0
2	1082.79980	526.89990	13.19000	66.09000	0.08280	1757.39990	0.0
2	1085.79980	527.89990	13.20000	66.07999	0.08270	1761.39990	0.0
2	1089.50000	532.79980	13.20000	66.09000	0.08270	1765.39990	0.0
2	1093.79980	534.79980	13.21000	66.09999	0.08270	1769.39990	0.0
2	1086.09985	520.59985	13.20000	66.12000	0.08280	1773.39990	0.0
2	1090.50000	516.00000	13.20000	66.14000	0.08280	1777.39990	0.0
2	1063.39990	512.19995	12.85000	65.56999	0.08360	2265.39966	0.0
2	1044.39990	510.79980	12.87000	65.67000	0.08380	2269.40039	0.0
2	1039.19995	510.19995	12.88000	65.73000	0.08390	2273.40088	0.0
2	1038.79980	510.19995	12.88000	65.75999	0.08390	2277.40039	0.0
2	1037.79980	509.00000	12.87000	65.78000	0.08410	2281.39990	0.0
2	1038.79980	513.39990	12.89000	65.78999	0.08400	2285.39917	1.11406
2	1039.09985	510.69995	12.89000	65.79999	0.08400	2289.39990	1.10092
2	1039.69995	512.50000	12.89000	65.78000	0.08390	2293.39941	1.10686
2	1040.59985	511.39990	12.90000	65.78999	0.08390	2297.40015	0.0
2	1042.79980	515.09985	12.90000	65.76999	0.08390	2301.40088	1.10979
2	1063.89990	524.39990	12.89000	65.78000	0.08390	2305.40039	0.0

AVERAGE VALUES

9- 7B-929 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
1045 - 1885	13.14166	66.06989	0.08303	1755.39868	12
1885 - 2400	12.88272	65.74713	0.08390	2285.39844	11

Figure 7.7.1-10. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-10. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-11B- 27		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
4	1041.29980	499.79980	13.74000	66.90999	0.08150	3.63333	0.0
4	1048.19995	511.69995	13.54000	67.53999	0.08420	18.34999	0.0
4	1044.59985	509.79980	13.51000	67.50000	0.08430	20.93329	0.0
4	1045.50000	510.79980	13.49000	67.54999	0.08460	24.83330	0.0
4	1045.89990	509.79980	13.45000	67.46999	0.08460	28.95000	0.0
4	1046.39990	509.69995	13.42000	67.42999	0.08470	32.96669	0.0
4	1045.89990	509.59985	13.40000	67.45000	0.08490	36.96669	0.0
4	1045.79980	510.09985	13.39000	67.48999	0.08500	40.95000	0.0
4	1065.59985	493.69995	13.62000	66.15999	0.08040	396.81689	0.0
4	1065.50000	492.50000	13.54000	66.10999	0.08070	400.81689	0.0
4	1066.19995	493.00000	13.53000	66.12999	0.08080	404.81689	0.0
4	1066.00000	501.89990	13.43000	66.40999	0.08210	408.81689	0.0
4	1066.79980	502.09985	13.42000	66.39999	0.08220	412.81689	0.0
4	1067.09985	500.89990	13.28000	66.35999	0.08290	416.81689	0.0
4	1067.50000	499.69995	13.33000	66.31000	0.08250	420.81689	0.0
4	1067.59985	500.39990	13.35000	66.31999	0.08230	424.81689	0.0
4	1068.59985	500.69995	13.37000	66.31000	0.08220	428.81689	0.0
4	1069.29980	501.09985	13.36000	66.31999	0.08230	432.81689	0.0
4	1069.39990	501.59985	13.35000	66.31999	0.08240	436.81689	0.0
4	1069.69995	501.69995	13.34000	66.31000	0.08240	440.81689	0.0
4	1070.69995	502.00000	13.38000	66.31999	0.08210	444.81689	0.0
4	1071.00000	501.79980	13.28000	66.29999	0.08270	448.81689	0.0
4	1070.69995	501.50000	13.19000	66.28000	0.08330	452.81689	0.0
4	1071.00000	501.79980	13.36000	66.28000	0.08220	456.81689	0.0
4	1070.89990	501.69995	13.27000	66.26999	0.08270	460.81689	0.0
4	1071.39990	501.79980	13.27000	66.25999	0.08270	464.81689	0.0
4	1062.79980	512.89990	13.77000	65.20999	0.07720	1733.39990	0.0
4	1062.59985	514.09985	13.75000	65.20000	0.07730	1737.39990	0.0
4	1064.59985	515.09985	13.73000	65.20000	0.07740	1741.39990	0.0
4	1066.19995	516.00000	13.70000	65.20999	0.07760	1745.39990	0.0
4	1076.79980	517.69995	13.69000	65.21999	0.07770	1753.39990	0.0
4	1090.09985	524.09985	13.65000	65.25000	0.07800	1757.39990	0.0
4	1091.29980	523.89990	13.63000	65.23000	0.07800	1761.39990	0.0
4	1092.29980	523.29980	13.62000	65.23000	0.07810	1765.39990	0.0
4	1077.69995	513.59985	13.59000	65.21999	0.07830	1773.39990	0.0
4	1079.00000	513.79980	13.57000	65.21999	0.07830	1777.39990	0.0
4	1064.00000	511.50000	13.46000	64.43999	0.07720	2269.40039	0.0
4	1064.09985	510.59985	13.44000	64.46999	0.07730	2273.40088	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
4	1066.39990	512.79980	13.45000	64.45000	0.07720	2277.40039	0.0
4	1066.59985	513.29980	13.44000	64.42999	0.07720	2281.39990	0.0
4	1067.29980	514.00000	13.41000	64.42000	0.07730	2285.39917	0.0
4	1067.59985	514.29980	13.41000	64.39999	0.07730	2289.39990	0.0
4	1067.09985	513.19995	13.40000	64.37000	0.07730	2293.39941	0.0
4	1067.29980	512.09985	13.38000	64.39000	0.07750	2297.40015	0.0
4	1067.89990	512.69995	13.38000	64.39999	0.07750	2301.40088	0.0
4	1078.39990	518.19995	13.37000	64.37000	0.07740	2305.40039	0.0

AVERAGE VALUES						
9-11B- 27	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	13.49250	67.41745	0.08422	25.94791	8	
233 - 1045	13.37055	66.28706	0.08216	430.81641	18	
1045 - 1885	13.66999	65.21896	0.07779	1754.59863	10	
1885 - 2400	13.41399	64.41391	0.07732	2287.39868	10

Figure 7.7.1-11. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-11. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-11B- 28		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1138.69995	559.00000	13.31000	67.39000	0.08530	3.63333	0.0
6	1101.29980	540.59985	13.06000	67.23000	0.08650	18.34999	0.0
6	1095.50000	535.00000	13.02000	67.06999	0.08630	20.93329	0.0
6	1095.79980	536.29980	13.00000	67.14999	0.08670	24.83330	0.0
6	1095.69995	535.69995	12.97000	67.09000	0.08680	28.95000	0.0
6	1095.79980	535.89990	12.95000	67.09999	0.08690	32.96669	0.0
6	1095.39990	536.29980	12.94000	67.12000	0.08710	36.96669	0.0
6	1095.69995	537.19995	12.92000	67.12999	0.08720	40.95000	0.0
6	1092.00000	521.39990	12.32000	64.28999	0.08390	45.28169	0.0
6	1073.69995	521.29980	12.52000	64.57999	0.08330	396.81689	0.0
6	1076.00000	521.39990	12.48000	64.57999	0.08350	400.81689	0.0
6	1082.00000	523.09985	12.44000	64.56999	0.08380	404.81689	0.0
6	1086.19995	522.09985	12.38000	64.46999	0.08400	408.81689	0.0
6	1089.09985	522.69995	12.37000	64.42999	0.08390	412.81689	0.0
6	1090.69995	521.69995	12.33000	64.37000	0.08400	416.81689	0.0
6	1091.39990	520.29980	12.30000	64.29999	0.08400	420.81689	0.0
6	1091.50000	521.00000	12.33000	64.29999	0.08390	424.81689	0.0
6	1092.29980	521.29980	12.33000	64.31000	0.08380	428.81689	0.0
6	1092.69995	521.79980	12.32000	64.31999	0.08390	432.81689	0.0
6	1092.00000	521.59985	12.32000	64.31999	0.08400	436.81689	0.0
6	1092.19995	521.50000	12.31000	64.31999	0.08400	440.81689	0.0
6	1092.50000	521.59985	12.31000	64.31000	0.08400	444.81689	0.0
6	1092.50000	521.59985	12.29000	64.31000	0.08410	448.81689	0.0
6	1092.09985	521.59985	12.27000	64.28999	0.08420	456.81689	0.0
6	1091.89990	521.50000	12.26000	64.26999	0.08420	460.81689	0.0
6	1092.19995	521.59985	12.26000	64.25999	0.08420	464.81689	0.0
6	1069.09985	524.89990	7.01000	52.06000	0.09670	1733.39990	0.0
6	1057.50000	522.50000	7.11000	52.29999	0.09620	1737.39990	0.0
6	1054.89990	523.39990	7.38000	52.70000	0.09410	1745.39990	1.11098
6	1056.29980	524.69995	7.55000	52.93999	0.09290	1749.39990	1.11391
6	1076.09985	524.00000	7.79000	53.53000	0.09200	1753.39990	0.0
6	1107.09985	536.39990	7.92000	53.34000	0.08980	1757.39990	0.0
6	1112.59985	539.09985	7.96000	53.28999	0.08910	1761.39990	0.0
6	1120.50000	542.19995	8.03000	53.32999	0.08850	1765.39990	0.0
6	1129.00000	544.89990	8.07000	53.31000	0.08800	1769.39990	0.0
6	1090.29980	510.89990	7.89000	53.39000	0.09030	1773.39990	0.0
6	1094.09985	510.39990	7.86000	53.34000	0.09050	1777.39990	0.0
6	1063.00000	506.09985	9.24000	56.01999	0.08490	2265.39966	0.0
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1050.69995	506.29980	9.34000	56.37000	0.08510	2269.40039	0.0
6	1046.89990	504.69995	9.41000	56.53999	0.08500	2273.40088	0.0
6	1048.59985	506.00000	9.46000	56.65999	0.08490	2277.40039	0.0
6	1050.19995	507.19995	9.49000	56.75999	0.08490	2281.39990	0.0
6	1052.89990	508.79980	9.52000	56.84000	0.08480	2285.39917	0.0
6	1055.79980	510.00000	9.54000	56.89000	0.08480	2289.39990	0.0
6	1058.50000	510.50000	9.53000	56.92999	0.08500	2293.39941	0.0
6	1062.50000	511.00000	9.54000	56.96999	0.08510	2297.40015	0.0
6	1066.69995	511.89990	9.53000	56.98999	0.08520	2301.40088	0.0
6	1077.50000	516.09985	9.58000	57.07999	0.08500	2305.40039	0.0
AVERAGE VALUES							
9-11B- 28							
	TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
	(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
	0 - 233	12.94333	66.84100	0.08630	28.09610	9	
	233 - 1045	12.34234	64.37103	0.08393	429.52246	17	
	1045 - 1885	7.68818	53.04807	0.09165	1756.67139	11	
	1885 - 2400	9.47090	56.73175	0.08497	2285.39844	11

Figure 7.7.1-12. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

9 - 11 B - 29

TABLE 7.7.1-12. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-11B- 29		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1119.00000	550.29980	13.37000	67.56000	0.08530	3.63333	0.0
8	1095.59985	539.59985	13.05000	67.23000	0.08660	16.34999	0.0
8	1087.59985	533.50000	13.04000	67.07999	0.08630	20.93329	0.0
8	1088.00000	534.19995	13.02000	67.12000	0.08650	24.83330	0.0
8	1087.89990	534.00000	12.99000	67.12000	0.08670	28.95000	0.0
8	1088.00000	533.89990	12.97000	67.12000	0.08680	32.96669	0.0
8	1087.39990	533.79980	12.95000	67.12999	0.08700	36.96669	0.0
8	1086.89990	533.89990	13.07000	67.12999	0.08710	40.99000	0.0
8	1086.59985	519.19995	12.30000	64.42999	0.08430	396.81689	0.0
8	1087.19995	519.00000	12.26000	64.53000	0.08490	400.81689	0.0
8	1093.00000	521.19995	12.20000	64.67000	0.08570	404.81689	0.0
8	1091.50000	518.59985	12.20000	64.57999	0.08540	408.81689	0.0
8	1097.00000	520.69995	12.15000	64.60999	0.08590	412.81689	0.0
8	1103.50000	521.39990	12.06000	64.54999	0.08640	416.81689	0.0
8	1110.19995	519.69995	12.05000	64.39000	0.08600	420.81689	0.0
8	1119.00000	521.59985	12.05000	64.40999	0.08610	424.81689	0.0
8	1130.50000	522.39990	12.01000	64.28000	0.08600	428.81689	0.0
8	1143.19995	523.50000	11.95000	64.00000	0.08570	432.81689	0.0
8	1149.79980	524.09985	11.90000	63.92000	0.08580	436.81689	0.0
8	1152.50000	524.19995	11.90000	63.85999	0.08570	440.81689	0.0
8	1153.69995	524.39990	11.84000	63.81999	0.08600	444.81689	0.0
8	1154.00000	524.29980	11.81000	63.79999	0.08620	448.81689	0.0
8	1154.00000	524.09985	11.76000	63.73000	0.08630	452.81689	0.0
8	1154.59985	524.50000	11.79000	63.75000	0.08620	456.81689	0.0
8	1154.29980	524.29980	11.74000	63.78999	0.08670	460.81689	0.0
8	1154.89990	522.79980	11.69000	63.53000	0.08630	464.81689	0.0
8	1084.09985	528.09985	12.60000	62.92999	0.07860	1733.39990	0.0
8	1068.50000	525.19995	12.59000	62.89000	0.07850	1737.39990	0.0
8	1064.50000	525.19995	12.58000	62.82999	0.07840	1741.39990	0.0
8	1065.59985	526.89990	12.55000	62.78000	0.07850	1745.39990	0.0
8	1064.59985	527.09985	12.52000	62.76999	0.07870	1749.39990	0.0
8	1083.59985	524.69995	12.51000	62.76999	0.07880	1753.39990	0.0
8	1114.69995	536.79980	12.54000	62.93999	0.07900	1757.39990	0.0
8	1116.59985	538.19995	12.55000	63.07999	0.07930	1761.39990	0.0
8	1121.39990	539.59985	12.53000	62.95000	0.07900	1765.39990	0.0
8	1126.59985	541.50000	12.52000	62.92999	0.07910	1769.39990	0.0
8	1099.19995	512.59985	12.50000	63.10999	0.07970	1773.39990	0.0
8	1099.19995	514.19995	12.49000	63.12000	0.07970	1777.39990	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1069.39990	512.39990	11.97000	61.31999	0.07850	2265.39966	0.0
8	1046.89990	509.50000	12.06000	61.50999	0.07850	2269.40039	0.0
8	1037.50000	506.29980	12.05000	61.59999	0.07870	2273.40088	0.0
8	1036.39990	507.19995	12.04000	61.62999	0.07890	2277.40039	0.0
8	1034.59985	508.00000	12.06000	61.62000	0.07870	2281.39990	1.10070
8	1036.69995	509.69995	12.04000	61.62000	0.07890	2285.39917	1.10350
8	1035.50000	509.59985	12.04000	61.59000	0.07870	2289.39990	1.10534
8	1044.69995	513.59985	12.03000	61.59000	0.07890	2293.39941	0.0
8	1034.69995	508.79980	12.02000	61.62000	0.07900	2297.40015	1.10490
8	1037.00000	509.89990	12.00000	61.62999	0.07910	2301.40088	1.10321
8	1060.50000	520.09985	12.00000	61.59999	0.07910	2305.40039	0.0

AVERAGE VALUES						
9-11B- 29	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	13.05749	67.18616	0.08654	25.94791	8	
233 - 1045	11.98110	64.14711	0.08587	430.81641	18	
1045 - 1885	12.53999	62.92493	0.07894	1755.39868	12	
1885 - 2400	12.02818	61.57536	0.07882	2285.39844	11

Figure 7.7.1-13. TELPS Leg Performance Data Normalized to $TH = 1090$ (F) $TC = 520$ (F)

TABLE 7.7.1-13. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 27		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1107.09985	540.29980	12.49000	67.54999	0.09140	3.63333	0.0
10	1089.10986	529.69995	12.28000	67.23000	0.09200	18.34999	0.0
10	1085.29980	527.19995	12.24000	67.14999	0.09210	20.93329	0.0
10	1085.89990	527.59985	12.22000	67.17999	0.09230	24.83330	0.0
10	1085.79980	527.29980	12.20000	67.15999	0.09240	28.95000	0.0
10	1085.79980	527.09985	12.18000	67.12999	0.09250	32.96669	0.0
10	1085.39990	527.09985	12.18000	67.17000	0.09260	36.96669	0.0
10	1085.09985	526.89990	12.17000	67.17999	0.09270	40.95000	0.0
10	1111.69995	518.19995	11.93000	63.96999	0.08570	396.81689	0.0
10	1118.39990	519.19995	11.87000	63.98000	0.08620	400.81689	0.0
10	1131.39990	522.00000	11.79000	63.89000	0.08660	404.81689	0.0
10	1112.59985	511.59985	11.75000	63.78000	0.08650	408.81689	0.0
10	1116.19995	511.59985	11.74000	63.75000	0.08660	412.81689	0.0
10	1119.59985	510.89990	11.70000	63.64000	0.08650	416.81689	0.0
10	1120.79980	509.89990	11.64000	63.60999	0.08690	420.81689	0.0
10	1122.00000	510.00000	11.71000	63.48000	0.08610	424.81689	0.0
10	1122.89990	510.29980	11.70000	63.48999	0.08610	428.81689	0.0
10	1123.50000	510.89990	11.68000	63.50999	0.08630	432.81689	0.0
10	1123.50000	511.39990	11.66000	63.50999	0.08650	436.81689	0.0
10	1123.79980	511.29980	11.65000	63.51999	0.08660	440.81689	0.0
10	1124.09985	511.19995	11.63000	63.50000	0.08670	444.81689	0.0
10	1124.09985	511.19995	11.57000	63.50999	0.08710	448.81689	0.0
10	1123.79980	511.00000	11.51000	63.50999	0.08760	452.81689	0.0
10	1123.79980	511.19995	11.55000	63.51999	0.08730	456.81689	0.0
10	1123.79980	511.00000	11.54000	63.45999	0.08730	460.81689	0.0
10	1123.79980	511.09985	11.62000	63.50000	0.08670	464.81689	0.0
10	1059.69995	511.19995	12.07000	62.60999	0.08120	1733.39990	0.0
10	1044.79980	508.29980	12.03000	62.62000	0.08150	1737.39990	0.0
10	1040.89990	508.19995	12.04000	62.62999	0.08140	1741.39990	0.0
10	1039.79980	508.29980	12.03000	62.62999	0.08150	1745.39990	0.0
10	1040.59985	509.50000	12.01000	62.64000	0.08170	1749.39990	0.0
10	1067.89990	513.09985	11.99000	62.64999	0.08190	1753.39990	0.0
10	1082.50000	506.19995	11.91000	62.78000	0.08270	1757.39990	0.0
10	1114.69995	535.29980	11.98000	62.76999	0.08220	1761.39990	0.0
10	1121.09985	537.29980	11.95000	62.78000	0.08240	1765.39990	0.0
10	1129.00000	539.59985	11.94000	62.79999	0.08250	1769.39990	0.0
10	1082.50000	506.19995	11.91000	62.78000	0.08270	1773.39990	0.0
10	1086.29980	507.09985	11.89000	62.79999	0.08290	1777.39990	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1060.29980	507.79980	11.69000	62.42000	0.08330	2265.39966	0.0
10	1042.89990	506.89990	11.63000	62.45999	0.08380	2269.40039	0.0
10	1036.29980	504.89990	11.63000	62.48999	0.08400	2273.40088	0.0
10	1035.29980	505.59985	11.62000	62.48999	0.08410	2277.40039	0.0
10	1035.09985	506.39990	11.59000	62.50000	0.08420	2281.39990	0.0
10	1035.89990	507.19995	11.60000	62.50999	0.08420	2285.39917	0.0
10	1037.00000	508.00000	11.60000	62.51999	0.08430	2289.39990	0.0
10	1037.79980	507.89990	11.58000	62.51999	0.08440	2293.39941	0.0
10	1039.79980	507.89990	11.58000	62.53000	0.08440	2297.40015	0.0
10	1043.39990	509.50000	11.58000	62.53999	0.08450	2301.40088	0.0
10	1071.50000	521.00000	11.56000	62.56999	0.08470	2305.40039	0.0

AVERAGE VALUES

9-14A- 27						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	• NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.24499	67.21869	0.09225	25.94791	8	
233 - 1045	11.67999	63.61823	0.08663	430.81641	18	
1045 - 1885	11.97916	62.70737	0.08205	1755.39868	12	
1885 - 2400	11.60545	62.50441	0.08417	2285.39844	11

Figure 7.7.1-14. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-14. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 28		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
12	1076.09985	509.69995	13.30000	66.67999	0.08360	3.63333	0.0
12	1094.09985	536.69995	12.83000	67.42000	0.08850	18.34999	0.0
12	1084.89990	528.09985	12.79000	67.21999	0.08830	20.93329	0.0
12	1084.89990	530.29980	12.75000	67.31999	0.08880	24.83330	0.0
12	1084.79980	530.09985	12.74000	67.28999	0.08880	28.95000	0.0
12	1084.69995	530.19995	12.73000	67.29999	0.08900	32.96669	0.0
12	1084.29980	530.39990	12.72000	67.31000	0.08910	36.96669	0.0
12	1083.89990	530.09985	12.69000	67.29999	0.08920	40.95000	0.0
12	1083.09985	494.29980	12.57000	63.01999	0.07900	396.81689	0.0
12	1085.50000	494.39990	12.45000	63.09999	0.08000	400.81689	0.0
12	1091.50000	496.00000	12.27000	63.03999	0.08100	404.81689	0.0
12	1087.79980	511.29980	12.12000	63.64999	0.08360	408.81689	0.0
12	1090.69995	511.29980	12.06000	63.56000	0.08370	412.81689	0.0
12	1092.39990	510.89990	12.02000	63.48000	0.08380	416.81689	0.0
12	1091.00000	509.19995	11.95000	63.40999	0.08410	420.81689	0.0
12	1092.00000	510.00000	11.96000	63.40999	0.08410	424.81689	0.0
12	1094.39990	511.19995	11.94000	63.37999	0.08410	428.81689	0.0
12	1095.29980	511.79980	11.90000	63.35999	0.08430	432.81689	0.0
12	1095.39990	512.50000	11.88000	63.35999	0.08440	436.81689	0.0
12	1095.69995	512.79980	11.87000	63.34000	0.08450	440.81689	0.0
12	1096.09985	513.09985	11.86000	63.31000	0.08450	444.81689	0.0
12	1096.19995	513.09985	11.92000	63.28000	0.08400	448.81689	0.0
12	1095.50000	513.09985	11.82000	63.28000	0.08470	452.81689	0.0
12	1095.89990	513.29980	11.80000	63.23000	0.08470	456.81689	0.0
12	1095.79980	513.29980	11.73000	63.20999	0.08520	460.81689	0.0
12	1096.19995	513.50000	11.74000	63.18999	0.08510	464.81396	0.0
12	1096.19995	513.50000	11.74000	63.18999	0.08510	464.81689	0.0
12	1069.29980	503.89990	12.30000	61.87000	0.07780	1733.39990	0.0
12	1061.59985	502.89990	12.26000	61.87999	0.07810	1737.39990	0.0
12	1060.59985	503.09985	12.22000	61.87999	0.07830	1741.39990	0.0
12	1061.69995	503.89990	12.23000	61.89000	0.07830	1745.39990	0.0
12	1063.59985	505.19995	12.15000	61.89000	0.07880	1749.39990	0.0
12	1079.09985	509.59985	12.10000	61.84999	0.07910	1753.39990	0.0
12	1099.79980	523.39990	12.09000	61.89000	0.07920	1757.39990	0.0
12	1103.50000	524.29980	12.04000	61.87000	0.07950	1761.39990	0.0
12	1107.69995	525.79980	12.03000	61.87000	0.07950	1765.39990	0.0
12	1112.59985	526.79980	12.02000	61.87999	0.07960	1769.39990	0.0
12	1066.39990	509.00000	11.98000	61.96999	0.08010	1773.39990	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
12	1070.09985	511.39990	11.96000	61.98000	0.08030	1777.39990	0.0
12	1071.89990	513.50000	12.01000	61.67000	0.07920	2265.39966	0.0
12	1055.19995	512.79980	11.94000	61.48000	0.07910	2273.40088	0.0
12	1055.29980	513.79980	11.92000	61.48000	0.07930	2277.40039	0.0
12	1055.29980	515.00000	11.92000	61.46999	0.07920	2281.39990	0.0
12	1056.79980	516.39990	11.89000	61.48000	0.07950	2285.39917	0.0
12	1058.19995	517.50000	11.90000	61.48000	0.07940	2289.39990	0.0
12	1059.19995	517.89995	11.89000	61.48000	0.07950	2293.39941	0.0
12	1061.29980	518.09985	11.87000	61.48999	0.07960	2297.40015	0.0
12	1063.39990	519.09985	11.85000	61.51999	0.07980	2301.40088	0.0
12	1078.19995	527.00000	11.83000	61.53999	0.08010	2305.40039	0.0

AVERAGE VALUES

9-14A- 28	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	12.81874	67.22989	0.08816	25.94791	8
233 - 1045	11.97894	63.30518	0.08368	432.60571	19
1045 - 1885	12.11499	61.89326	0.07905	1755.39868	12
1885 - 2400	11.90200	61.80893	0.07947	2286.99829	10

Figure 7.7.1-15. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.1-15. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 29		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1092.39990	525.19985	12.92000	66.92999	0.08670	3.63333	0.0
14	1084.29980	520.79980	12.73000	66.81000	0.08770	18.34999	0.0
14	1084.00000	520.19995	12.72000	66.79999	0.08770	20.93329	0.0
14	1084.29980	520.29980	12.70000	66.78999	0.08780	24.83330	0.0
14	1084.39990	519.69995	12.67000	66.78000	0.08800	28.95000	0.0
14	1084.69995	519.59985	12.66000	66.78000	0.08810	32.96669	0.0
14	1084.50000	519.79980	12.64000	66.78000	0.08820	36.96669	0.0
14	1084.29980	519.69995	12.64000	66.78000	0.08820	40.95000	0.0
14	1120.79980	507.19995	12.35000	64.48000	0.08420	396.81689	0.0
14	1135.29980	510.29980	12.26000	64.39000	0.08450	400.81689	0.0
14	1144.39980	509.00000	12.17000	64.20999	0.08470	404.31639	0.0
14	1091.79980	490.29980	12.14000	64.06999	0.08450	408.81689	0.0
14	1091.69995	490.79980	12.18000	64.07999	0.08430	412.81689	0.0
14	1091.29980	490.39990	12.10000	64.06999	0.08480	416.81689	0.0
14	1090.69995	488.69995	12.14000	64.00999	0.08440	420.31639	0.0
14	1090.50000	489.39990	12.15000	64.03999	0.08440	424.31689	0.0
14	1091.09985	489.69995	12.17000	64.03999	0.08420	428.31639	0.0
14	1091.79980	490.59985	12.16000	64.06000	0.08440	432.81689	0.0
14	1091.69995	491.29980	12.16000	64.09000	0.08440	436.81689	0.0
14	1091.59985	491.29980	12.15000	64.07999	0.08450	440.81689	0.0
14	1091.89990	491.39990	12.15000	64.07999	0.08450	444.81639	0.0
14	1092.00000	491.09985	12.11000	64.06999	0.08470	448.31639	0.0
14	1091.39990	491.00000	12.11000	64.06000	0.08470	452.31639	0.0
14	1091.69995	491.39990	12.08000	64.09000	0.08500	456.31689	0.0
14	1091.59985	491.19995	12.10000	64.09000	0.08490	460.31639	0.0
14	1091.79980	491.29980	12.09000	64.06999	0.08490	464.31639	0.0
14	1057.79980	507.59985	12.61000	64.01999	0.08130	1733.39990	0.0
14	1057.69995	505.19995	12.63000	64.03999	0.08120	1737.39990	0.0
14	1057.09985	505.29980	12.63000	64.10999	0.08140	1741.39990	0.0
14	1059.29980	506.59985	12.60000	64.14000	0.08160	1745.39990	0.0
14	1063.79980	508.29980	12.57000	64.17000	0.08190	1749.39990	0.0
14	1079.79980	512.39990	12.57000	64.10999	0.08180	1753.39990	0.0
14	1106.50000	528.79980	12.57000	64.03999	0.08160	1757.39990	0.0
14	1115.29980	531.69995	12.53000	64.09000	0.08200	1761.39990	0.0
14	1125.09985	543.69995	12.50000	64.12999	0.08220	1765.39990	0.0
14	1135.29980	534.59985	12.45000	64.14000	0.08260	1769.39990	0.0
14	1064.59985	511.79980	12.32000	63.93999	0.08290	1773.39990	0.0
14	1071.50000	518.79980	12.32000	63.95000	0.08300	1777.39990	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1056.50000	509.29980	12.28000	63.42999	0.08190	2265.39986	0.0
14	1036.79980	506.29980	12.38000	63.53000	0.08150	2273.40088	0.0
14	1037.09985	507.00000	12.38000	63.56000	0.08160	2277.40039	0.0
14	1037.39990	507.89990	12.41000	62.56999	0.08140	2281.39990	0.0
14	1039.09985	509.09985	12.38000	63.59000	0.08160	2285.39990	0.0
14	1040.79980	510.19995	12.38000	63.60999	0.08170	2289.39990	0.0
14	1042.29980	510.19995	12.37000	63.62000	0.08180	2293.39941	0.0
14	1048.79980	512.00000	12.38000	63.64999	0.08180	2301.40088	0.0
14	1076.09985	525.19995	12.37000	63.71999	0.08210	2305.40039	0.0

AVERAGE VALUES						
9-14A- 29	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.71000	66.80612	0.08780	25.94791	8	
233 - 1045	12.15388	64.11597	0.08456	430.81641	18	
1045 - 1885	12.52499	64.07324	0.08196	1755.39308	12	
1885 - 2400	12.36999	63.58661	0.08171	2285.84277	9	

7.7.2 PERFORMANCE TEST DATA

LOT 9 - N-TYPE

$T_H = 1220^{\circ}\text{F}$

$T_C = 520^{\circ}\text{F}$

BATCH	SAMPLE	TOTAL TIME (HR)	FIGURE NUMBER
4B	930	1742	7.7.2-1
	931	2199	7.7.2-2
	932	2195	7.7.2-3
6A	930	2195	7.7.2-4
	932	2199	7.7.2-5
	939	2195	7.7.2-6
7B	930	2195	7.7.2-7
	931	2199	7.7.2-8
	932	1652	7.7.2-9
11B	30	2105	7.7.2-10
	31	2105	7.7.2-11
	32	2105	7.7.2-12
14A	30	2105	7.7.2-13
	32	2105	7.7.2-14
	39	2105	7.7.2-15

Figure 7.7.2-1. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 4B-930		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
2	1223.69995	593.09985	15.50000	84.42999	0.11490	456.39990	0.0
2	1274.29980	609.89990	15.23000	84.57999	0.11750	460.39990	0.0
2	1226.89990	543.29980	14.62000	83.15999	0.11830	472.68286	0.0
2	1215.19995	531.39990	14.66000	82.87000	0.11710	476.39990	0.0
2	1215.50000	530.29980	14.71000	82.89999	0.11680	481.73291	0.0
2	1202.79980	567.79980	14.97000	81.89999	0.11200	1593.56982	1.21475
2	1267.39990	551.19995	14.57000	82.34000	0.11630	1609.56982	0.0
2	1217.50000	512.50000	14.47000	82.12000	0.11650	1613.56982	0.0
2	1216.29980	509.00000	14.51000	82.31000	0.11680	1625.56982	0.0
2	1216.89990	512.89990	14.49000	82.31000	0.11690	1629.56982	0.0
2	1217.19995	515.29980	14.49000	82.34000	0.11700	1633.56982	0.0
2	1217.50000	512.89990	14.50000	82.31999	0.11680	1637.56982	0.0
2	1217.19995	513.19995	14.52000	82.34000	0.11680	1641.56982	0.0
2	1216.89990	514.09985	14.51000	82.37000	0.11690	1645.56982	0.0
2	1217.79980	513.59985	14.51000	82.34000	0.11680	1649.56982	0.0
2	1217.79980	514.29980	14.50000	82.35999	0.11700	1653.56982	0.0
2	1217.19995	514.79980	14.50000	82.35999	0.11690	1657.56982	0.0
2	1217.50000	514.09985	14.54000	82.34999	0.11660	1661.56982	0.0
2	1217.50000	513.79980	14.51000	82.34000	0.11680	1665.56982	0.0
2	1216.29980	511.59985	14.49000	82.32999	0.11690	1669.56982	0.0
2	1218.69995	516.79980	14.50000	82.32999	0.11690	1673.56982	0.0
2	1219.00000	515.69995	14.49000	82.28999	0.11680	1677.56982	0.0
2	1218.09985	510.79980	14.52000	82.29999	0.11660	1681.56982	0.0
2	1218.39990	512.29980	14.53000	82.28000	0.11650	1685.56982	0.0
2	1218.69995	514.89990	14.51000	82.28999	0.11670	1689.56982	0.0
2	1218.39990	514.00000	14.51000	82.25999	0.11660	1693.56982	0.0
2	1218.39990	514.39990	14.51000	82.25999	0.11660	1697.56982	0.0
2	1219.00000	513.89990	14.50000	82.20999	0.11650	1701.56982	0.0
2	1219.00000	515.19995	14.50000	82.20000	0.11650	1705.56982	0.0
2	1219.29980	511.39990	14.51000	82.21999	0.11650	1709.56982	0.0
2	1219.59985	512.89990	14.47000	82.18999	0.11670	1713.56982	0.0
2	1219.00000	515.79980	14.49000	82.17000	0.11650	1717.56982	0.0
2	1219.29980	513.39990	14.49000	82.14999	0.11650	1721.56982	0.0
2	1219.59985	514.50000	14.47000	82.14000	0.11650	1725.56982	0.0
2	1219.00000	514.50000	14.46000	82.12999	0.11660	1728.72998	0.0
2	1114.39990	502.50000	14.46000	81.00000	0.11340	2114.80957	1.16070
2	1105.29980	499.19995	14.43000	81.00999	0.11370	2118.81030	1.16975
2	1105.89990	501.29980	14.39000	81.03000	0.11400	2126.81055	1.17769

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
2	1212.19995	519.79980	14.21000	81.34000	0.11640	2178.81079	0.0
2	1211.29980	516.89990	14.17000	81.37999	0.11680	2182.81006	0.0
2	1214.00000	519.19995	14.16000	81.37999	0.11690	2186.81079	0.0
2	1215.79980	515.79980	14.14000	81.37999	0.11710	2190.81030	0.0
2	1218.39990	519.89990	14.13000	81.39999	0.11730	2194.80981	0.0
2	1219.89990	520.00000	14.12000	81.40999	0.11740	2198.80933	0.0

AVERAGE VALUES						
9- 4B-930	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
233 - 1045	14.94399	83.58794	0.11692	469.52295	5	
1045 - 1885	14.51795	82.26154	0.11653	1670.33862	30	
1885 - 2400	14.24555	81.25880	0.11589	2165.91968	9

Figure 7.7.2-2. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-2. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 48-931		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
4	1200.29980	528.39990	15.17000	84.78999	0.11840	5.78333	0.0
4	1227.89990	524.29980	14.83000	84.78000	0.12120	9.76667	0.0
4	1227.19995	525.00000	14.74000	84.87999	0.12220	13.76670	0.0
4	1210.89990	518.29980	14.67000	84.75000	0.12240	18.61670	0.0
4	1209.29980	518.19995	14.65000	84.84999	0.12290	21.93329	0.0
4	1209.59985	527.50000	14.46000	84.78000	0.12420	25.75000	0.0
4	1209.79980	517.39990	14.44000	84.73000	0.12430	29.75000	0.0
4	1208.29980	517.29980	14.42000	84.73999	0.12450	33.75000	0.0
4	1188.69995	504.89990	14.42000	84.32999	0.12330	39.75000	0.0
4	1188.69995	504.89990	14.42000	84.32999	0.12330	39.75000	0.0
4	1241.19995	571.19995	15.02000	83.96999	0.11740	448.39990	0.0
4	1231.29980	555.50000	14.89000	83.42999	0.11690	452.39990	0.0
4	1217.50000	540.39990	14.87000	83.00999	0.11580	456.39990	0.0
4	1231.79980	541.00000	14.84000	82.82999	0.11560	460.39990	0.0
4	1231.50000	540.59985	14.82000	82.75999	0.11560	464.39990	0.0
4	1227.79980	539.69995	14.81000	82.78999	0.11570	468.46680	0.0
4	1214.29980	533.59985	14.81000	82.62000	0.11520	472.68286	0.0
4	1209.00000	528.39990	14.81000	82.46999	0.11480	476.39990	0.0
4	1209.59985	528.59985	14.80000	82.45999	0.11490	481.73291	0.0
4	1204.59985	548.19995	16.42000	80.43999	0.09850	1593.56982	1.13088
4	1213.39990	530.59985	15.53000	80.56999	0.10450	1609.56982	0.0
4	1214.00000	527.29980	15.44000	80.56000	0.10510	1613.56982	0.0
4	1211.89990	525.50000	14.96000	80.62999	0.10860	1625.56982	0.0
4	1213.39990	529.59985	14.79000	80.62999	0.10990	1629.56982	0.0
4	1213.39990	530.19995	14.71000	80.56000	0.11030	1633.56982	0.0
4	1213.69995	530.59985	14.64000	80.54999	0.11080	1637.56982	0.0
4	1213.69995	530.69995	14.55000	80.56000	0.11150	1641.56982	0.0
4	1213.39990	531.09985	14.53000	80.50999	0.11150	1645.56982	0.0
4	1214.00000	531.00000	14.49000	80.50000	0.11180	1649.56982	0.0
4	1214.29980	531.09985	14.48000	80.45000	0.11170	1653.56982	0.0
4	1213.69995	531.09985	14.43000	80.42000	0.11200	1657.56982	0.0
4	1214.00000	531.19995	14.44000	80.40999	0.11190	1661.56982	0.0
4	1213.69995	531.19995	14.39000	80.42000	0.11240	1665.56982	0.0
4	1212.79980	530.19995	14.39000	80.40999	0.11230	1669.56982	0.0
4	1214.89990	531.19995	14.36000	80.34000	0.11240	1673.56982	0.0
4	1215.79980	531.39990	14.33000	80.23000	0.11230	1677.56982	0.0
4	1215.19995	531.19995	14.32000	80.21999	0.11240	1681.56982	0.0
4	1215.50000	531.59985	14.28000	80.20000	0.11260	1685.56982	0.0
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
4	1216.29980	531.29980	14.27000	80.20999	0.11270	1689.56982	0.0
4	1216.00000	531.19995	14.25000	80.17999	0.11280	1693.56982	0.0
4	1215.79980	531.29980	14.23000	80.15999	0.11290	1697.56982	0.0
4	1216.29980	531.39990	14.22000	80.12000	0.11290	1701.56982	0.0
4	1216.00000	531.29980	14.21000	80.10999	0.11290	1705.56982	0.0
4	1216.00000	531.39990	14.21000	80.12999	0.11290	1709.56982	0.0
4	1215.79980	531.19995	14.19000	80.17000	0.11320	1713.56982	0.0
4	1214.89990	530.59985	14.15000	80.14999	0.11350	1717.56982	0.0
4	1215.79980	531.00000	14.15000	80.10999	0.11340	1721.56982	0.0
4	1215.50000	531.59985	14.14000	80.12000	0.11350	1725.56982	0.0
4	1215.50000	531.39990	14.12000	80.10999	0.11360	1728.72998	0.0
4	1167.79980	513.39990	14.19000	78.89999	0.10960	2114.80957	0.0
4	1171.69995	515.50000	14.11000	78.96999	0.11050	2118.81030	0.0
4	1175.19995	515.19995	14.06000	79.17999	0.11140	2126.81055	0.0
4	1199.00000	497.00000	13.86000	79.42000	0.11380	2178.81079	0.0
4	1209.89990	500.39990	13.88000	79.42999	0.11360	2182.81006	0.0
4	1210.19995	499.79980	13.84000	79.42000	0.11400	2186.81079	0.0
4	1209.29980	498.19995	13.86000	79.45000	0.11390	2190.81030	0.0
4	1212.79980	502.29980	13.85000	79.42999	0.11390	2194.80981	0.0
4	1214.00000	503.09985	13.84000	79.43999	0.11400	2198.80933	0.0

AVERAGE VALUES						
9- 48-931	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	14.62199	84.69592	0.12267	23.86166	10	
233 - 1045	14.85222	82.92656	0.11577	464.58667	9	
1045 - 1885	14.52062	80.33923	0.11123	1670.33862	30	
1885 - 2400	13.94333	79.29329	0.11274	2165.91968	9

Figure 7.7.2-3. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-3. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 4B-932		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1239.09985	556.69995	14.65000	83.68999	0.11950	5.78333	0.0
6	1254.79980	561.09985	14.28000	83.51999	0.12220	9.76667	0.0
6	1253.89990	562.19995	14.08000	83.46999	0.12370	13.76670	0.0
6	1238.00000	552.89990	13.92000	83.18999	0.12430	18.61670	0.0
6	1236.79980	552.79980	13.62000	83.10999	0.12680	25.75000	0.0
6	1236.19995	553.09985	13.53000	83.03000	0.12740	29.75000	0.0
6	1235.00000	553.39990	13.46000	82.95999	0.12790	33.75000	0.0
6	1227.19995	548.50000	13.38000	82.75999	0.12800	39.75000	0.0
6	1227.19995	548.50000	13.38000	82.75999	0.12800	39.75000	0.0
6	1229.19995	543.79980	13.99000	79.57999	0.11320	443.76685	0.0
6	1214.59985	522.29980	14.22000	79.04999	0.10980	448.39990	0.0
6	1213.39990	521.89990	14.17000	79.09000	0.11040	452.39990	0.0
6	1211.89990	519.79980	14.15000	79.01999	0.11030	456.39990	0.0
6	1236.79980	531.59985	14.06000	79.20999	0.11160	460.39990	0.0
6	1235.89990	531.69995	14.02000	79.17000	0.11180	464.39990	0.0
6	1227.79980	528.39990	14.03000	79.12000	0.11150	468.46680	0.0
6	1212.19995	518.89990	14.03000	79.98000	0.11120	472.68286	0.0
6	1209.89990	517.39990	14.03000	78.96999	0.11110	476.39990	0.0
6	1209.89990	517.09985	13.99000	78.92000	0.11130	481.73291	0.0
6	1207.19995	547.69995	14.46000	78.35999	0.10620	1593.56982	1.12262
6	1206.29980	512.79980	14.17000	78.32999	0.10820	1609.56982	0.0
6	1212.79980	509.89990	14.16000	78.28999	0.10820	1625.56982	0.0
6	1214.89990	516.79980	14.10000	78.25000	0.10860	1629.56982	0.0
6	1214.59985	517.69995	14.10000	78.21999	0.10840	1633.56982	0.0
6	1214.59985	518.00000	14.07000	78.20999	0.10870	1637.56982	0.0
6	1214.59985	518.09985	14.04000	78.14999	0.10880	1641.56982	0.0
6	1214.00000	518.69995	14.03000	78.14999	0.10890	1645.56982	0.0
6	1214.59985	518.59985	14.02000	78.12000	0.10890	1649.56982	0.0
6	1214.59985	518.79980	13.98000	78.09999	0.10910	1653.56982	0.0
6	1214.00000	518.79980	13.99000	78.06999	0.10900	1657.56982	0.0
6	1214.00000	519.00000	13.97000	78.06999	0.10910	1661.56982	0.0
6	1214.00000	519.00000	13.96000	78.03999	0.10910	1665.56982	0.0
6	1212.79980	518.29980	13.90000	78.04999	0.10960	1669.56982	0.0
6	1214.59985	519.19995	13.94000	78.03000	0.10920	1673.56982	0.0
6	1214.59985	519.50000	13.93000	78.01999	0.10920	1677.56982	0.0
6	1214.00000	519.19995	13.92000	78.00000	0.10930	1681.56982	0.0
6	1214.29980	519.50000	13.91000	77.96999	0.10920	1685.56982	0.0
6	1214.59985	518.69995	13.90000	78.00000	0.10940	1689.56982	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1214.00000	518.89990	13.90000	77.98000	0.10940	1693.56982	0.0
6	1214.00000	519.00000	13.85000	77.93999	0.10970	1697.56982	0.0
6	1214.59985	519.19995	13.87000	77.92999	0.10940	1701.56982	0.0
6	1214.29980	519.09985	13.86000	77.92000	0.10950	1705.56982	0.0
6	1215.19995	519.79980	13.84000	77.87999	0.10960	1709.56982	0.0
6	1215.19995	519.89990	13.85000	77.87999	0.10950	1713.56982	0.0
6	1214.29980	519.39990	13.85000	77.87000	0.10950	1717.56982	0.0
6	1214.89990	519.39990	13.84000	77.82999	0.10940	1721.56982	0.0
6	1214.89990	519.69995	13.89000	77.84000	0.10940	1725.56982	0.0
6	1214.59985	519.19995	13.85000	77.89000	0.10950	1728.72998	0.0
6	1135.29980	489.79980	10.70000	68.84999	0.11070	2114.80957	0.0
6	1130.50000	488.89990	10.66000	69.56999	0.11350	2118.81030	0.0
6	1149.50000	495.19995	10.73000	69.85999	0.11370	2126.81055	0.0
6	1211.09985	509.89990	11.30000	71.04999	0.11170	2178.81079	0.0
6	1213.09985	515.00000	11.32000	71.06999	0.11150	2182.81006	0.0
6	1212.79980	514.19995	11.26000	71.03999	0.11210	2186.81079	0.0
6	1212.79980	513.79980	11.21000	71.04999	0.11250	2190.81030	0.0
6	1212.50000	514.19995	11.19000	71.07999	0.11290	2194.80981	0.0

AVERAGE VALUES						
9- 4B-932	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	13.81110	83.16544	0.12531	24.07593	9	
233 - 1045	14.06900	79.21094	0.11122	462.50415	10	
1045 - 1885	13.96925	78.04782	0.10903	1672.29614	29	
1885 - 2400	11.04624	70.44614	0.11232	2161.80859	8

Figure 7.7.2-4. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-4. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 6A-930		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1183.59985	521.79980	15.29000	82.73999	0.11190	5.78333	0.0
8	1205.79980	529.09985	14.97000	82.84000	0.11460	9.76667	0.0
8	1244.89990	527.69995	14.54000	82.65999	0.11740	13.76670	0.0
8	1225.69995	518.39990	14.38000	82.45000	0.11820	18.61670	0.0
8	1224.50000	518.50000	14.30000	82.43999	0.11880	21.93329	0.0
8	1223.09985	518.00000	14.09000	82.43999	0.12060	25.75000	0.0
8	1222.50000	517.69995	14.02000	82.40999	0.12110	29.75000	0.0
8	1221.29980	517.50000	13.96000	82.23999	0.12110	33.75000	0.0
8	1220.69995	518.29980	13.90000	82.25999	0.12170	39.75000	0.0
8	1220.69995	518.29980	13.90000	82.25999	0.12170	39.75000	0.0
8	1225.69995	526.00000	14.33000	80.21999	0.11230	443.76685	0.0
8	1235.29980	525.69995	14.32000	79.87999	0.11140	452.39990	0.0
8	1213.39990	507.79980	14.35000	79.34999	0.10980	456.39990	0.0
8	1250.09985	532.39990	14.26000	79.87000	0.11180	460.39990	0.0
8	1258.50000	535.89990	14.25000	79.81999	0.11180	464.39990	0.0
8	1241.39990	530.79980	14.23000	79.75999	0.11170	468.46680	0.0
8	1212.50000	514.19995	14.27000	79.45000	0.11060	472.68286	0.0
8	1211.29980	514.09985	14.25000	79.39000	0.11060	476.39990	0.0
8	1211.09985	513.50000	14.29000	79.37000	0.11020	481.73291	0.0
8	1121.09985	474.50000	14.53000	77.28999	0.10280	1625.56982	0.0
8	1129.89990	515.19995	14.47000	77.26999	0.10320	1629.56982	1.17540
8	1127.19995	515.39990	14.49000	77.32999	0.10320	1633.56982	1.18349
8	1126.59985	516.09985	14.47000	77.43999	0.10360	1637.56982	1.18807
8	1137.50000	521.00000	14.44000	77.35999	0.10360	1641.56982	1.18130
8	1139.29980	523.50000	14.44000	77.31000	0.10350	1645.56982	1.18693
8	1142.00000	524.79980	14.44000	77.31999	0.10350	1649.56982	1.18557
8	1144.69995	526.19995	14.43000	77.26999	0.10340	1653.56982	1.18442
8	1147.69995	527.50000	14.43000	77.25000	0.10340	1657.56982	1.18307
8	1153.69995	529.89990	14.43000	77.17999	0.10320	1661.56982	1.17674
8	1162.09985	532.79980	14.40000	77.09000	0.10320	1665.56982	1.16874
8	1170.50000	535.19995	14.40000	77.14000	0.10330	1669.56982	1.15807
8	1184.79980	538.09985	14.36000	77.03000	0.10330	1673.56982	1.13641
8	1201.00000	539.89990	14.11000	77.00999	0.10510	1677.56982	1.10748
8	1221.59985	540.00000	14.16000	77.09999	0.10490	1681.56982	0.0
8	1247.50000	537.59985	14.20000	77.21999	0.10490	1685.56982	0.0
8	1253.29980	525.69995	14.13000	77.20000	0.10540	1689.56982	0.0
8	1248.39990	517.69995	14.10000	77.15999	0.10560	1693.56982	0.0
8	1249.00000	518.29980	14.09000	77.12000	0.10550	1697.56982	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1249.79980	518.69995	14.08000	77.12000	0.10560	1701.56982	0.0
8	1250.39990	518.89990	14.08000	77.09000	0.10560	1705.56982	0.0
8	1251.00000	519.29980	14.06000	77.03999	0.10560	1709.56982	0.0
8	1249.79980	518.09985	14.06000	77.00999	0.10540	1713.56982	0.0
8	1246.39990	516.89990	14.05000	77.00000	0.10550	1717.56982	0.0
8	1246.39990	517.09985	14.05000	76.96999	0.10550	1721.56982	0.0
8	1247.79980	517.79980	14.04000	76.92999	0.10540	1728.72998	0.0
8	1135.29980	475.19995	13.82000	74.65999	0.10080	2114.80957	0.0
8	1123.79980	472.00000	13.84000	75.21999	0.10220	2118.81030	0.0
8	1123.79980	471.00000	13.79000	75.20000	0.10250	2126.81055	0.0
8	1210.79980	480.19995	13.74000	75.32999	0.10330	2178.81079	0.89592
8	1218.09985	469.19995	13.65000	75.45000	0.10430	2182.81006	0.85632
8	1223.39990	467.00000	13.61000	75.50999	0.10470	2186.81079	0.84299
8	1226.29980	466.69995	13.59000	75.53000	0.10490	2190.81030	0.83853
8	1227.50000	467.00000	13.57000	75.50999	0.10510	2194.80981	0.83879

AVERAGE VALUES						
9- 6A-930	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	14.33499	82.47392	0.11871	23.86166	10	
233 - 1045	14.28333	79.67879	0.11113	464.07202	9	
1045 - 1885	14.26685	77.16335	0.10435	1675.68823	26	
1885 - 2400	13.70124	75.30115	0.10347	2161.80859	8

Figure 7.7.2-5. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-5. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 6A-932		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
IX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1191.59985	524.00000	14.58000	82.92999	0.11790	5.78333	0.0
10	1233.59985	532.09985	14.22000	82.98999	0.12110	9.76667	0.0
10	1240.59985	532.09985	14.05000	82.92999	0.12230	13.76670	0.0
10	1224.79980	525.69995	13.96000	82.76999	0.12270	18.61670	0.0
10	1224.19995	526.09985	13.88000	82.78000	0.12350	21.93329	0.0
10	1223.39990	525.39990	13.66000	82.70000	0.12510	25.75000	0.0
10	1225.39990	526.59985	13.58000	82.70999	0.12590	29.75000	0.0
10	1224.19995	525.89990	13.52000	82.62999	0.12630	33.75000	0.0
10	1219.89990	525.19995	13.43000	82.56999	0.12690	39.75000	0.0
10	1219.89990	525.19995	13.43000	82.56999	0.12690	39.75000	0.0
10	1240.59985	536.59985	13.72000	79.65999	0.11560	443.76685	0.0
10	1231.79980	515.89990	13.96000	78.96999	0.11170	448.39990	0.0
10	1217.19995	513.59985	13.95000	79.06999	0.11200	452.39990	0.0
10	1212.79980	510.09985	13.95000	78.95999	0.11170	456.39990	0.0
10	1226.29980	517.79980	13.90000	79.14000	0.11260	460.39990	0.0
10	1226.69995	517.59985	13.90000	79.14000	0.11260	464.39990	0.0
10	1223.69995	517.79980	13.91000	79.18999	0.11270	468.46680	0.0
10	1213.09985	515.79980	13.84000	79.17000	0.11320	472.68286	0.0
10	1208.69995	513.09985	13.86000	79.14000	0.11300	476.39990	0.0
10	1208.69995	512.50000	13.85000	79.12000	0.11300	481.73291	0.0
10	1200.50000	520.69995	13.93000	77.95999	0.10910	1593.56982	0.0
10	1236.79980	496.89990	13.70000	78.12000	0.11140	1609.56982	0.0
10	1216.89990	489.09985	13.64000	78.03999	0.11160	1613.56982	0.0
10	1211.89990	497.79980	13.64000	78.00999	0.11150	1625.56982	0.0
10	1213.69995	503.79980	13.62000	78.00999	0.11170	1629.56982	0.0
10	1213.39990	503.59985	13.60000	77.95999	0.11170	1633.56982	0.0
10	1213.39990	503.59985	13.59000	77.98000	0.11180	1637.56982	0.0
10	1213.39990	503.89990	13.59000	77.98000	0.11190	1641.56982	0.0
10	1213.09985	504.09985	13.57000	77.96999	0.11200	1645.56982	0.0
10	1213.69995	504.09985	13.58000	77.98000	0.11200	1649.56982	0.0
10	1214.00000	504.39990	13.55000	77.96999	0.11210	1653.56982	0.0
10	1213.09985	504.29980	13.56000	77.98999	0.11220	1657.56982	0.0
10	1213.09985	504.39990	13.56000	78.00000	0.11220	1661.56982	0.0
10	1213.09985	504.39990	13.55000	77.98000	0.11220	1665.56982	0.0
10	1212.50000	504.29980	13.54000	77.98000	0.11230	1669.56982	0.0
10	1214.00000	504.59985	13.53000	77.95999	0.11230	1673.56982	0.0
10	1213.69995	504.69995	13.53000	77.98999	0.11240	1677.56982	0.0
10	1213.39990	504.59985	13.52000	77.96999	0.11240	1681.56982	0.0
10	1213.39990	504.89990	13.51000	78.00999	0.11260	1685.56982	0.0
10	1213.09985	504.89990	13.50000	78.01999	0.11270	1689.56982	0.0
10	1213.09985	504.89990	13.51000	78.01999	0.11270	1693.56982	0.0
10	1213.09985	505.09985	13.52000	78.04999	0.11270	1697.56982	0.0
10	1213.69995	505.00000	13.49000	78.03000	0.11280	1701.56982	0.0
10	1213.39990	504.89990	13.50000	78.03999	0.11280	1705.56982	0.0
10	1213.69995	505.50000	13.51000	78.06999	0.11280	1709.56982	0.0
10	1214.00000	505.50000	13.52000	78.06000	0.11270	1713.56982	0.0
10	1213.09985	505.00000	13.48000	78.06999	0.11310	1717.56982	0.0
10	1213.69995	505.29980	13.48000	78.07999	0.11300	1721.56982	0.0
10	1213.69995	505.69995	13.47000	78.09999	0.11320	1725.56982	0.0
10	1213.39990	505.50000	13.48000	78.09999	0.11310	1728.72998	0.0
10	1115.29980	460.19995	13.45000	77.60999	0.11200	2114.80957	0.0
10	1105.59985	457.69995	13.40000	77.50000	0.11200	2118.81030	0.0
10	1107.39990	457.89990	13.34000	77.50000	0.11260	2126.81055	0.0
10	1228.29980	486.59985	13.24000	77.68999	0.11400	2178.81079	0.88854
10	1211.09985	481.29980	13.19000	77.67000	0.11430	2182.81006	0.89788
10	1211.59985	482.69995	13.18000	77.67000	0.11440	2186.81079	0.0
10	1212.19995	483.09985	13.17000	77.67000	0.11450	2190.81030	0.0
10	1211.89990	482.09985	13.16000	77.67000	0.11460	2194.80981	0.89882
10	1211.09985	480.69995	13.14000	77.67000	0.11480	2198.80933	0.89687

AVERAGE VALUES

9- 6A-932

TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	13.83099	82.75790	0.12386	23.86166	10
233 - 1045	13.88399	79.15593	0.11281	462.50415	10
1045 - 1885	13.55896	78.01656	0.11223	1670.33862	30
1885 - 2400	13.25222	77.62770	0.11369	2165.91968	9

7-5

Figure 7.7.2-6. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-6. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 6A-939		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
12	1204.29980	548.59985	15.10000	83.81000	0.11630	5.78333	0.0
12	1223.09985	554.19995	14.81000	83.84000	0.11870	9.76667	0.0
12	1222.79980	556.00000	14.69000	83.98000	0.12000	13.76670	0.0
12	1217.50000	552.79980	14.58000	83.89999	0.12070	18.61670	0.0
12	1216.89990	553.79980	14.53000	83.95000	0.12130	21.93329	0.0
12	1215.79980	553.29980	14.31000	83.92999	0.12310	25.75000	0.0
12	1216.29980	554.50000	14.24000	83.93999	0.12370	29.75000	0.0
12	1215.19995	555.09985	14.20000	83.90999	0.12400	33.75000	0.0
12	1212.50000	552.09985	14.14000	83.81000	0.12420	39.75000	0.0
12	1212.50000	552.09985	14.14000	83.81000	0.12420	39.75000	0.0
12	1217.79980	543.89990	14.57000	80.31999	0.11070	437.39990	0.0
12	1214.89990	534.09985	14.46000	79.87000	0.11030	441.39990	0.0
12	1233.00000	532.89990	14.25000	79.35999	0.11050	445.39990	0.0
12	1232.69995	532.89990	14.00000	78.93999	0.11130	449.39990	0.0
12	1226.29980	531.79980	13.78000	78.53999	0.11200	453.46680	0.0
12	1213.09985	524.19995	13.61000	77.95000	0.11160	457.68286	0.0
12	1210.50000	522.50000	13.48000	77.62999	0.11170	461.39990	0.0
12	1210.50000	522.00000	13.30000	77.17000	0.11200	466.73291	0.0
12	1197.79980	568.79980	13.69000	74.39999	0.10110	1578.56982	1.23293
12	1212.79980	532.59985	13.49000	74.56999	0.10310	1594.56982	0.0
12	1212.50000	532.39990	13.49000	74.57999	0.10310	1598.56982	0.0
12	1215.50000	526.19995	13.39000	74.70999	0.10420	1610.56982	0.0
12	1217.79980	533.00000	13.37000	74.67999	0.10430	1614.56982	0.0
12	1218.39990	534.00000	13.35000	74.62000	0.10430	1618.56982	0.0
12	1219.29980	534.59985	13.35000	74.57999	0.10410	1622.56982	0.0
12	1219.89990	535.09985	13.33000	74.57999	0.10430	1626.56982	0.0
12	1220.19995	535.69995	13.32000	74.59000	0.10450	1630.56982	0.0
12	1221.29980	535.59985	13.30000	74.54999	0.10450	1634.56982	0.0
12	1221.59985	536.29980	13.29000	74.54999	0.10460	1638.56982	0.0
12	1221.29980	536.39990	13.29000	74.51999	0.10450	1642.56982	0.0
12	1221.59985	536.89990	13.26000	74.50000	0.10470	1646.56982	0.0
12	1221.59985	536.89990	13.25000	74.48999	0.10470	1650.56982	0.0
12	1221.00000	536.19995	13.24000	74.45000	0.10470	1654.56982	0.0
12	1222.50000	537.19995	13.23000	74.43999	0.10470	1658.56982	0.0
12	1222.79980	537.50000	13.22000	74.40999	0.10470	1662.56982	0.0
12	1222.19995	537.69995	13.21000	74.39000	0.10470	1666.56982	0.0
12	1222.79980	538.19995	13.21000	74.35999	0.10460	1670.56982	0.0
12	1216.89990	534.79980	13.24000	74.48000	0.10470	1674.56982	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
12	1214.89990	532.89990	13.22000	74.45000	0.10480	1678.56982	0.0
12	1214.89990	533.19995	13.20000	74.42999	0.10490	1682.56982	0.0
12	1215.50000	533.50000	13.20000	74.40999	0.10490	1686.56982	0.0
12	1215.50000	533.59985	13.19000	74.37000	0.10480	1690.56982	0.0
12	1215.50000	533.59985	13.18000	74.37999	0.10490	1694.56982	0.0
12	1215.79980	533.69995	13.19000	74.34000	0.10480	1698.56982	0.0
12	1215.19995	533.39990	13.17000	74.32999	0.10490	1702.56982	0.0
12	1215.50000	533.69995	13.18000	74.34000	0.10480	1706.56982	0.0
12	1215.79980	534.29980	13.16000	74.31000	0.10490	1710.56982	0.0
12	1215.79980	533.89990	13.18000	74.35999	0.10480	1713.72998	0.0
12	1154.59985	522.79980	13.24000	73.73000	0.10260	2114.80957	1.14509
12	1149.19995	522.19995	13.17000	73.64000	0.10290	2118.81030	1.15618
12	1154.59985	525.00000	13.08000	73.62000	0.10360	2126.81055	1.15496
12	1206.29980	526.89990	12.83000	74.00999	0.10670	2178.81079	0.0
12	1212.19995	528.19995	12.81000	74.03000	0.10700	2182.81006	0.0
12	1213.69995	530.29980	12.77000	74.00000	0.10720	2186.81079	0.0
12	1214.59985	530.79980	12.78000	73.98999	0.10710	2190.81030	0.0
12	1214.29980	530.09985	12.75000	74.00000	0.10740	2194.80981	0.0

AVERAGE VALUES						
9- 6A-939	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	14.47399	83.88791	0.12162	23.86166	10	
233 - 1045	13.93125	78.72241	0.11126	451.61011	8	
1045 - 1885	13.27964	74.47221	0.10442	1655.33862	30	
1885 - 2400	12.92874	73.87744	0.10556	2161.80859	8

Figure 7.7.2-7. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-7. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 78-930		*** NORMALIZED TO TC=520 TH=1220 ***				TIME (HRS)	P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
14	1221.00000	554.50000	14.87000	84.14000	0.11910	5.78333	0.0
14	1266.89990	561.09985	14.29000	84.10999	0.12380	9.76667	0.0
14	1266.59985	562.09985	14.07000	83.93999	0.12520	13.76670	0.0
14	1237.39990	544.50000	14.00000	83.64999	0.12500	18.61670	0.0
14	1238.79980	546.89990	13.95000	83.68999	0.12550	21.93329	0.0
14	1238.79980	546.79980	13.78000	83.65999	0.12700	25.75000	0.0
14	1239.69995	547.29980	13.74000	83.67999	0.12740	29.75000	0.0
14	1239.09985	547.59985	13.71000	83.62999	0.12750	33.75000	0.0
14	1229.19995	544.19995	13.75000	83.59999	0.12710	39.75000	0.0
14	1229.19995	544.19995	13.75000	83.59999	0.12710	39.75000	0.0
14	1217.50000	526.00000	14.60000	80.92999	0.11220	44.84000	0.0
14	1216.89990	556.39990	14.31000	81.92999	0.11730	443.76685	0.0
14	1215.19995	524.59985	14.57000	80.92999	0.11260	452.39990	0.0
14	1211.89990	521.59985	14.60000	80.84999	0.11190	456.39990	0.0
14	1237.69995	536.39990	14.55000	81.04999	0.11290	460.39990	0.0
14	1237.09985	536.59985	14.49000	81.03000	0.11330	464.39990	0.0
14	1233.59985	535.19995	14.48000	81.03000	0.11330	468.46680	0.0
14	1218.39990	527.50000	14.48000	80.85999	0.11290	472.68286	0.0
14	1211.29980	520.79980	14.49000	80.70999	0.11240	476.39990	0.0
14	1211.29980	520.69995	14.47000	80.70000	0.11260	481.73291	0.0
14	1247.00000	564.39990	14.54000	80.07999	0.11030	1593.56982	1.10190
14	1212.79980	515.79980	14.37000	79.85999	0.11100	1609.56982	0.0
14	1211.89990	515.39990	14.31000	79.82999	0.11130	1613.56982	0.0
14	1205.50000	507.09985	14.37000	79.68999	0.11050	1625.56982	0.0
14	1206.59985	513.29980	14.36000	79.64000	0.11040	1629.56982	0.0
14	1205.79980	513.59985	14.34000	79.64999	0.11060	1633.56982	0.0
14	1205.50000	513.50000	14.34000	79.62999	0.11050	1637.56982	0.0
14	1204.29980	512.59985	14.30000	79.62000	0.11080	1641.56982	0.0
14	1204.89990	513.50000	14.29000	79.56999	0.11080	1645.56982	0.0
14	1205.50000	513.59985	14.29000	79.59000	0.11080	1649.56982	0.0
14	1205.79980	514.00000	14.28000	79.54999	0.11080	1653.56982	0.0
14	1205.19995	513.89990	14.26000	79.53999	0.11090	1657.56982	0.0
14	1205.19995	514.00000	14.24000	79.53999	0.11110	1661.56982	0.0
14	1205.19995	514.00000	14.25000	79.53000	0.11100	1665.56982	0.0
14	1204.59985	513.29980	14.23000	79.50000	0.11100	1669.56982	0.0
14	1205.79980	514.00000	14.24000	79.50999	0.11100	1673.56982	0.0
14	1205.79980	514.29980	14.22000	79.50000	0.11120	1677.56982	0.0
14	1205.19995	514.19995	14.23000	79.48999	0.11100	1681.56982	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1205.50000	514.69995	14.24000	79.48999	0.11090	1685.56982	0.0
14	1213.69995	516.29980	14.26000	79.50000	0.11080	1689.56982	0.0
14	1216.59985	519.69995	14.25000	79.42000	0.11060	1693.56982	0.0
14	1216.29980	519.79980	14.25000	79.42000	0.11060	1697.56982	0.0
14	1216.89990	520.09985	14.25000	79.37999	0.11060	1701.56982	0.0
14	1216.29980	520.09985	14.25000	79.40999	0.11070	1705.56982	0.0
14	1216.59985	520.19995	14.24000	79.37999	0.11060	1709.56982	0.0
14	1216.89990	520.50000	14.25000	79.37000	0.11050	1713.56982	0.0
14	1216.00000	520.09985	14.24000	79.35999	0.11060	1717.56982	0.0
14	1216.29980	520.39990	14.23000	79.37999	0.11070	1721.56982	0.0
14	1216.59985	520.89990	14.23000	79.34999	0.11060	1725.56982	0.0
14	1216.59985	520.79980	14.22000	79.34999	0.11070	1728.72998	0.0
14	1142.00000	518.29980	15.43000	78.45999	0.09970	2114.80957	1.15796
14	1140.19995	517.89990	15.41000	78.50999	0.10000	2118.81030	1.16009
14	1165.09985	526.09985	15.31000	78.59999	0.10090	2126.81055	1.13371
14	1214.29980	539.09985	14.98000	78.73000	0.10350	2178.81079	0.0
14	1201.59985	508.19995	14.84000	78.73999	0.10440	2182.81006	0.0
14	1201.59985	507.09985	14.82000	78.73000	0.10460	2186.81079	0.0
14	1202.19995	507.00000	14.81000	78.71999	0.10460	2190.81030	0.0
14	1200.69995	506.00000	14.78000	78.71999	0.10480	2194.80981	0.0

AVERAGE VALUES						
9- 78-930	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE (HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	14.04636	83.51173	0.12426	25.76877	11	
233 - 1045	14.49332	81.00989	0.11324	464.07202	9	
1045 - 1885	14.27898	79.53755	0.11076	1670.33862	30	
1885 - 2400	15.04750	78.65121	0.10281	2161.80859	8

Figure 7.7.2-8. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-8. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 7B-931		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
16	1218.09985	532.39990	15.25000	83.60999	0.11460	5.78333	0.0
16	1225.69995	534.89990	15.03000	83.71999	0.11660	9.76667	0.0
16	1224.50000	536.09985	14.96000	83.82999	0.11750	13.76670	0.0
16	1219.29980	534.00000	14.89000	83.78999	0.11790	18.61670	0.0
16	1219.00000	535.29980	14.85000	83.85999	0.11840	21.93329	0.0
16	1222.79980	549.09985	14.79000	81.64000	0.11270	443.76685	0.0
16	1264.00000	547.79980	15.03000	81.14999	0.10960	448.39990	0.0
16	1243.19995	542.59985	14.98000	81.09000	0.10970	452.39990	0.0
16	1215.79980	518.79980	14.96000	80.48999	0.10820	456.39990	0.0
16	1226.89990	524.69995	14.95000	80.53999	0.10850	460.39990	0.0
16	1226.29980	524.39990	14.92000	80.50000	0.10860	464.39990	0.0
16	1222.19995	523.29980	14.92000	80.50000	0.10860	468.46680	0.0
16	1212.50000	518.79980	14.92000	80.39999	0.10830	472.68286	0.0
16	1210.19995	516.29980	14.90000	80.29999	0.10820	476.39990	0.0
16	1210.50000	516.29980	14.90000	80.29999	0.10820	481.73291	0.0
16	1225.09985	511.79980	14.88000	79.75000	0.10680	1609.56982	0.0
16	1210.50000	501.19995	14.85000	79.67999	0.10690	1613.56982	0.0
16	1207.79980	497.69995	14.85000	79.71999	0.10700	1625.56982	0.0
16	1209.00000	504.19995	14.82000	79.71999	0.10720	1629.56982	0.0
16	1208.39990	504.50000	14.79000	79.68999	0.10730	1633.56982	0.0
16	1208.09985	504.39990	14.80000	79.67000	0.10730	1637.56982	0.0
16	1207.79980	504.29980	14.79000	79.67999	0.10730	1641.56982	0.0
16	1207.19995	504.39990	14.78000	79.64000	0.10730	1645.56982	0.0
16	1207.50000	504.29980	14.77000	79.64000	0.10740	1649.56982	0.0
16	1207.19995	504.50000	14.76000	79.64000	0.10750	1653.56982	0.0
16	1206.29980	504.09985	14.75000	79.62000	0.10750	1657.56982	0.0
16	1206.29980	504.09985	14.74000	79.62000	0.10750	1661.56982	0.0
16	1206.09985	504.09985	14.74000	79.62999	0.10750	1665.56982	0.0
16	1205.19995	503.59985	14.73000	79.62999	0.10760	1669.56982	0.0
16	1206.29980	503.89990	14.71000	79.60999	0.10770	1673.56982	0.0
16	1206.29980	504.09985	14.73000	79.59000	0.10750	1677.56982	0.0
16	1205.79980	503.69995	14.71000	79.57999	0.10760	1681.56982	0.0
16	1206.09985	503.89990	14.70000	79.53999	0.10760	1685.56982	0.0
16	1215.19995	507.69995	14.73000	79.59000	0.10750	1689.56982	0.0
16	1218.39990	511.19995	14.73000	79.53000	0.10730	1693.56982	0.0
16	1218.09985	511.00000	14.74000	79.50999	0.10720	1697.56982	0.0
16	1218.69995	511.09985	14.71000	79.45000	0.10730	1701.56982	0.0
16	1218.39990	510.79980	14.69000	79.42999	0.10740	1705.56982	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
16	1218.69995	511.29980	14.70000	79.42000	0.10730	1709.56982	0.0
16	1218.69995	511.19995	14.70000	79.39999	0.10720	1713.56982	0.0
16	1217.50000	510.50000	14.69000	79.40999	0.10740	1717.56982	0.0
16	1218.09985	510.69995	14.67000	79.39000	0.10740	1721.56982	0.0
16	1218.09985	511.29980	14.68000	79.42999	0.10740	1725.56982	0.0
16	1217.19995	510.89990	14.69000	79.43999	0.10740	1728.72998	0.0
16	1155.19995	503.09985	14.29000	78.96999	0.10910	2114.80957	0.0
16	1148.00000	499.79980	14.42000	79.00999	0.10830	2118.81030	0.0
16	1167.50000	506.19995	14.44000	78.65999	0.10710	2126.81055	0.0
16	1208.69995	504.50000	14.37000	78.56999	0.10740	2178.81079	0.0
16	1210.50000	495.29980	14.32000	78.57999	0.10780	2186.81079	0.0
16	1210.79980	495.09985	14.33000	78.59000	0.10780	2190.81030	0.0
16	1209.89990	494.19995	14.32000	78.57999	0.10780	2194.80981	0.0
16	1210.50000	497.19995	14.30000	78.56999	0.10790	2198.80933	0.0

AVERAGE VALUES						
9- 7B-931	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	14.99600	83.76196	0.11700	13.97334	5	
233 - 1045	14.92700	80.69092	0.10906	462.50415	10	
1045 - 1885	14.74583	79.57402	0.10735	1672.98584	29	
1885 - 2400	14.34874	78.69116	0.10790	2163.80859	8	

9 - 7 B - 932

TABLE 7.7.2-9. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 7B-932		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
2	1229.50000	534.69995	16.09999	82.64000	0.10600	452.86694	0.0
2	1231.79980	536.50000	16.03999	82.81999	0.10690	456.86694	0.0
2	1231.00000	534.50000	15.97000	82.85999	0.10750	460.86694	0.0
2	1231.00000	532.39990	15.89000	82.81999	0.10790	464.86694	0.0
2	1223.69995	531.00000	15.81000	82.81999	0.10840	468.86694	0.0
2	1224.00000	526.69995	15.81000	82.67000	0.10810	472.86694	0.0
2	1224.19995	529.69995	15.77000	82.75000	0.10860	476.86694	0.0
2	1222.79980	527.89990	15.75000	82.68999	0.10850	480.86694	0.0
2	1222.79980	527.89990	15.68000	82.64000	0.10890	484.86694	0.0
2	1222.50000	526.29980	15.68000	82.54999	0.10870	488.86694	0.0
2	1223.09985	525.89990	15.66000	82.46999	0.10860	492.13281	0.0
2	1194.00000	508.50000	15.91000	81.32999	0.10390	1663.12988	0.0
2	1212.19995	508.19995	15.84000	81.45999	0.10480	1667.12988	0.0
2	1217.19995	513.29980	15.79000	81.48000	0.10510	1671.12988	0.0
2	1219.00000	514.59985	15.73000	81.43999	0.10540	1675.12988	0.0
2	1219.00000	515.39990	15.69000	81.37999	0.10550	1679.12988	0.0
2	1218.69995	515.19995	15.65000	81.32999	0.10570	1683.12988	0.0
2	1220.39990	516.69995	15.62000	81.31000	0.10580	1687.12988	0.0
2	1220.19995	513.29980	15.56000	81.28000	0.10610	1691.12988	0.0
2	1219.89990	513.19995	15.54000	81.28000	0.10630	1695.12988	0.0
2	1219.59985	516.79980	15.49000	81.25000	0.10660	1699.12988	0.0
2	1218.69995	513.50000	15.49000	81.26999	0.10660	1703.12988	0.0
2	1213.09985	513.29980	15.46000	81.28999	0.10690	1706.69995	0.0
2	1149.79980	499.59985	15.51000	80.92999	0.10560	2069.12036	0.0
2	1145.59985	499.39990	15.52000	80.92000	0.10550	2073.11987	0.0
2	1151.29980	503.50000	15.52000	80.95000	0.10560	2077.12036	0.0
2	1159.69995	505.29980	15.51000	80.96999	0.10570	2081.12109	0.0
2	1241.19995	547.19995	15.58000	81.10999	0.10560	2085.12061	0.0
2	1265.09985	544.59985	15.47000	81.23999	0.10670	2089.11987	0.0
2	1277.19995	548.09985	15.39000	81.26999	0.10730	2093.12061	0.0
2	1280.59985	549.19995	15.34000	81.26999	0.10760	2097.12012	0.0
2	1282.89990	551.69995	15.28000	81.28999	0.10810	2101.11963	0.0
2	1284.09985	552.29980	15.25000	81.31999	0.10840	2105.12036	0.0

AVERAGE VALUES

9- 7B-932							
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA		
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)			
233 - 1045	15.83272	82.70265	0.10801	472.79956	11		
1045 - 1885	15.64749	81.34155	0.10572	1682.09302	12		
1885 - 2400	15.43699	81.12688	0.10661	2087.11792	10

Figure 7.7.2-10. TELPS Leg Performance Data Normalized to TH = 1220 (F) : C = 520 (F)

TABLE 7.7.2-10. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-11B- 30		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	P. FACTOR
4	1235.29980	538.89990	16.07999	82.95000	0.10700	452.86694	0.0
4	1236.50000	541.50000	15.87000	82.92000	0.10840	456.86694	0.0
4	1235.59985	539.89990	15.77000	82.75999	0.10860	460.86694	0.0
4	1235.59985	539.89990	15.70000	82.64999	0.10870	464.86694	0.0
4	1226.59985	536.59985	15.59000	82.67000	0.10960	468.86694	0.0
4	1214.89990	528.50000	15.56000	82.48000	0.10930	472.86694	0.0
4	1224.50000	534.09985	15.54000	82.60999	0.10980	476.86694	0.0
4	1223.09985	533.09985	15.51000	82.59999	0.11000	480.86694	0.0
4	1223.09985	532.39990	15.48000	82.54999	0.11010	484.86694	0.0
4	1222.79980	532.09985	15.48000	82.53000	0.11000	488.86694	0.0
4	1223.09985	532.19995	15.48000	82.48999	0.10990	492.13281	0.0
4	1210.79980	526.29980	15.69000	80.18999	0.10250	1663.12988	0.0
4	1212.50000	526.00000	15.48000	80.09999	0.10360	1667.12988	0.0
4	1212.79980	526.89990	15.42000	80.12999	0.10410	1671.12988	0.0
4	1213.69995	527.79980	15.27000	80.09000	0.10500	1675.12988	0.0
4	1214.00000	528.50000	15.21000	80.03999	0.10530	1679.12988	0.0
4	1214.89990	529.29980	15.13000	80.09000	0.10600	1687.12988	0.0
4	1215.79930	529.39990	15.07000	80.00999	0.10620	1691.12988	0.0
4	1218.39990	529.69995	15.02000	79.67000	0.10560	1695.12988	0.0
4	1217.50000	529.89990	14.93000	79.67000	0.10630	1699.12988	0.0
4	1217.79980	530.29980	14.91000	79.56000	0.10610	1703.12988	0.0
4	1217.79980	530.79980	14.88000	79.56000	0.10640	1706.69995	0.0
4	1201.59985	528.50000	15.24000	78.81000	0.10190	2069.12036	0.0
4	1205.79980	531.09985	15.20000	78.95000	0.10250	2073.11987	0.0
4	1209.00000	529.00000	15.14000	79.00000	0.10310	2077.12036	0.0
4	1212.19995	528.09985	15.10000	79.00000	0.10330	2081.12109	0.0
4	1214.00000	528.39990	15.06000	79.00999	0.10360	2085.12061	0.0
4	1215.50000	529.50000	15.04000	78.96999	0.10360	2089.11987	0.0
4	1217.50000	528.59985	14.99000	78.98000	0.10400	2093.12061	0.0
4	1220.19995	531.89990	15.00000	78.95000	0.10390	2097.12012	0.0
4	1222.19995	533.50000	14.99000	78.92999	0.10390	2101.11963	0.0
4	1222.79980	534.79980	14.96000	78.96999	0.10420	2105.12036	0.0

AVERAGE VALUES

9-11B- 30						
TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA	
233 - 1045	15.64181	82.65535	0.10922	472.79956	11	
1045 - 1885	15.18272	79.91896	0.10519	1685.27148	11	
1885 - 2400	15.07199	78.95692	0.10340	2087.11792	10

Figure 7.7.2-11. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-11. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-11B- 31		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
6	1158.79980	454.09985	14.42000	79.95999	0.11080	1.50000	0.0
6	1218.69995	540.29980	13.81000	82.84999	0.12430	11.50000	0.0
6	1212.50000	536.79980	13.66000	82.62000	0.12490	19.50000	0.0
6	1210.19995	532.39990	13.62000	82.45999	0.12480	23.50000	0.0
6	1209.89990	532.79980	13.59000	82.31999	0.12470	27.50000	0.0
6	1210.19995	533.39990	13.53000	82.04999	0.12440	31.50000	0.0
6	1209.59985	533.69995	13.50000	82.09000	0.12470	35.50000	0.0
6	1210.50000	534.39990	13.48000	81.51999	0.12320	39.50000	0.0
6	1210.79980	535.00000	13.46000	81.51999	0.12350	43.50000	0.0
6	1210.19995	535.29980	13.46000	82.23999	0.12570	47.50000	0.0
6	1209.59985	535.29980	13.43000	82.34000	0.12620	51.50000	0.0
6	1210.19995	535.69995	13.41000	81.67000	0.12440	55.50000	0.0
6	1210.19995	536.00000	13.34000	81.92000	0.12570	59.50000	0.0
6	1227.79980	530.19995	13.07000	75.40999	0.10880	452.86694	0.0
6	1229.79980	534.39990	14.15000	78.48999	0.10880	456.86694	0.0
6	1228.59985	534.29980	14.13000	78.50000	0.10900	460.86694	0.0
6	1229.19995	534.79980	14.11000	78.56999	0.10930	464.86694	0.0
6	1221.59985	528.79980	14.43000	79.32999	0.10900	468.86694	0.0
6	1218.39990	523.79980	14.39000	79.23999	0.10910	472.86694	0.0
6	1221.89990	526.39990	14.38000	79.37000	0.10950	476.86694	0.0
6	1219.00000	524.69995	14.34000	79.29999	0.10960	480.86694	0.0
6	1218.69995	524.39990	14.34000	79.26999	0.10960	484.86694	0.0
6	1218.39990	524.29980	14.33000	79.28000	0.10970	488.86694	0.0
6	1218.69995	524.50000	14.32000	79.25999	0.10970	492.13281	0.0
6	1210.19995	513.29980	10.28000	67.78999	0.11180	1663.12988	0.0
6	1209.59985	512.39990	10.34000	68.09999	0.11220	1667.12988	0.0
6	1210.19995	513.29980	10.35000	68.29999	0.11260	1671.12988	0.0
6	1210.19995	513.39990	11.04000	69.70999	0.11000	1675.12988	0.0
6	1209.59985	514.09985	11.31000	70.37000	0.10950	1679.12988	0.0
6	1209.59985	514.89990	11.21000	70.23999	0.11000	1683.12988	0.0
6	1211.29980	515.29980	11.19000	70.21999	0.11010	1687.12988	0.0
6	1211.29980	515.29980	11.16000	70.20999	0.11040	1691.12988	0.0
6	1211.09985	515.89990	11.14000	70.25000	0.11070	1695.12988	0.0
6	1209.89990	516.00000	11.43000	70.89000	0.10990	1699.12988	0.0
6	1209.59985	517.19995	11.38000	70.82999	0.11020	1703.12988	0.0
6	1209.59985	517.89990	11.36000	70.82999	0.11040	1706.69995	0.0
6	1141.39990	462.89990	7.33000	64.37999	0.14140	2069.12036	0.0
6	1139.59985	459.00000	7.57000	65.14000	0.14010	2073.11987	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1156.69995	464.39990	7.85000	65.40999	0.13620	2077.12036	0.0
6	1176.39990	471.09985	8.28000	65.81000	0.13070	2081.12109	0.0
6	1236.50000	499.79980	9.79000	68.10999	0.11850	2085.12061	0.0
6	1249.59985	512.00000	10.20000	68.75000	0.11590	2089.11987	0.0
6	1250.09985	511.89990	10.09000	68.92000	0.11760	2093.12061	0.0
6	1249.59985	512.39990	10.03000	69.03999	0.11880	2097.12012	0.0
6	1250.39990	513.50000	9.97000	69.12000	0.11980	2101.11963	0.0
6	1250.39990	514.50000	9.98000	69.20000	0.12000	2105.12036	0.0

AVERAGE VALUES						
9-11B- 31 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA	
0 - 233	13.59307	81.96603	0.12364	34.42307	13	
233 - 1045	14.18090	78.72897	0.10928	472.79956	11	
1045 - 1885	11.01583	69.81160	0.11065	1685.09302	12	
1885 - 2400	9.10899	67.38791	0.12590	2087.11792	10

Figure 7.7.2-12. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-12. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-118- 32		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (N OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
8	1160.29980	441.19995	16.25999	79.89999	0.09820	1.50000	0.0
8	1219.89990	516.69995	15.38000	82.50000	0.11060	11.50000	0.0
8	1217.50000	517.69995	15.04000	82.53000	0.11320	19.50000	0.0
8	1210.50000	514.69995	14.91000	82.54999	0.11430	23.50000	0.0
8	1210.50000	513.39990	14.89000	82.37999	0.11400	27.50000	0.0
8	1210.50000	513.69995	14.83000	82.39000	0.11440	31.50000	0.0
8	1209.59985	513.09985	14.78000	82.28999	0.11460	35.50000	0.0
8	1209.59985	513.09985	14.74000	82.25999	0.11480	39.50000	0.0
8	1209.59985	513.69995	14.70000	82.23000	0.11500	43.50000	0.0
8	1209.59985	514.09985	14.67000	82.17999	0.11510	47.50000	0.0
8	1208.69995	513.69995	14.63000	82.21999	0.11550	51.50000	0.0
8	1208.69995	510.79980	14.65000	81.84999	0.11430	55.50000	0.0
8	1208.69995	509.89990	14.65000	81.70999	0.11400	59.50000	0.0
8	1220.19995	525.69995	14.89000	79.81999	0.10700	452.86694	0.0
8	1236.50000	529.69995	14.75000	79.98000	0.10840	456.86694	0.0
8	1235.00000	528.19995	14.73000	79.90999	0.10840	460.86694	0.0
8	1233.89990	527.09985	14.65000	79.95999	0.10910	464.86694	0.0
8	1219.59985	521.79980	14.62000	79.87999	0.10910	468.86694	0.0
8	1216.59985	518.19995	14.61000	79.71999	0.10870	472.86694	0.0
8	1225.69995	524.39990	14.59000	79.84000	0.10920	476.86694	0.0
8	1223.39990	522.59985	14.58000	79.75000	0.10900	480.86694	0.0
8	1222.50000	521.79980	14.56000	79.75999	0.10920	484.86694	0.0
8	1222.50000	521.29980	14.53000	79.67999	0.10920	488.86694	0.0
8	1222.79980	521.79980	14.49000	79.70000	0.10960	492.13281	0.0
8	1249.00000	503.50000	13.98000	76.31999	0.10410	1663.12988	0.0
8	1268.89990	506.89990	14.16000	76.68999	0.10380	1671.12988	0.88718
8	1269.19995	507.29980	14.18000	76.73999	0.10380	1675.12988	0.88718
8	1269.50000	508.50000	14.18000	76.70999	0.10380	1679.12988	0.89099
8	1269.50000	508.89990	14.13000	76.68999	0.10400	1683.12988	0.89117
8	1270.59985	509.00000	14.12000	76.60999	0.10390	1703.12988	0.88955
8	1202.50000	489.59985	14.03000	76.51999	0.10430	1706.69995	0.0
8	1163.89990	473.00000	12.64000	74.81000	0.11070	2069.12036	0.0
8	1155.50000	469.69995	12.64000	74.92999	0.11110	2073.11987	0.0
8	1155.79980	469.50000	12.64000	74.98000	0.11120	2077.12036	0.0
8	1164.79980	474.69995	12.66000	74.95000	0.11090	2081.12109	0.0
8	1240.29980	513.00000	12.76000	74.81999	0.10970	2085.12061	0.0
8	1273.50000	511.79980	12.77000	75.09000	0.11020	2089.11987	0.89375
8	1298.29980	512.50000	12.73000	75.23999	0.11110	2093.12061	0.86392

	(F)	(F)	(N OHM)	(MV)	(WATT)	(HRS)	
8	1303.09985	514.69995	12.71000	75.28000	0.11150	2097.12012	0.86367
8	1307.09985	516.69995	12.65000	75.21999	0.11190	2101.11963	0.86409
8	1308.50000	518.09985	12.61000	75.18999	0.11210	2105.12036	0.86564

AVERAGE VALUES						
9-118- 32	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE (HRS)	(N OHM)	(MV)	(WATT)	(HRS)		
0 - 233	14.93307	82.07607	0.11292	34.42307	13	
233 - 1045	14.63636	79.81812	0.10881	472.79956	11	
1045 - 1885	14.11142	76.61136	0.10396	1683.06738	7	
1885 - 2400	12.68099	75.04492	0.11104	2087.11792	10

Figure 7.7.2-13. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-13. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 30		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
10	1162.39990	443.69995	13.39000	80.26999	0.10470	11.50000	0.0
10	1162.39990	443.69995	13.39000	80.26999	0.10470	11.50000	0.0
10	1211.89990	521.50000	13.75000	82.75999	0.12460	19.50000	0.0
10	1209.29980	519.50000	13.70000	82.70000	0.12480	23.50000	0.0
10	1209.89990	519.89990	13.69000	82.70999	0.12490	27.50000	0.0
10	1209.89990	520.19995	13.63000	82.70000	0.12550	31.50000	0.0
10	1209.29980	520.19995	13.60000	82.71999	0.12580	35.50000	0.0
10	1209.29980	520.19995	13.57000	82.73000	0.12610	39.50000	0.0
10	1209.29980	520.50000	13.54000	82.76999	0.12650	43.50000	0.0
10	1209.29980	520.50000	13.52000	82.75999	0.12660	47.50000	0.0
10	1208.69995	520.19995	13.49000	82.75999	0.12690	51.50000	0.0
10	1208.69995	520.50000	13.49000	82.79999	0.12710	55.50000	0.0
10	1209.00000	520.50000	13.48000	82.78999	0.12710	59.50000	0.0
10	1232.09985	529.09985	13.48000	79.59999	0.11750	452.86694	0.0
10	1242.29980	534.00000	13.51000	79.81000	0.11790	456.86694	0.0
10	1242.29980	533.09985	13.48000	79.75000	0.11800	460.86694	0.0
10	1242.29980	532.79980	13.46000	79.70999	0.11800	464.86694	0.0
10	1217.50000	518.79980	13.53000	79.42999	0.11660	468.86694	0.0
10	1209.59985	509.69995	13.55000	79.23999	0.11580	472.86694	0.0
10	1229.19995	525.39990	13.50000	79.67000	0.11750	476.86694	0.0
10	1231.00000	526.00000	13.47000	79.60999	0.11760	480.86694	0.0
10	1231.00000	525.39990	13.46000	79.56999	0.11760	484.86694	0.0
10	1231.00000	525.29980	13.45000	79.56000	0.11770	488.86694	0.0
10	1231.00000	525.19995	13.41000	79.54999	0.11790	492.13281	0.0
10	1193.69995	473.00000	13.36000	77.39000	0.11210	1663.12988	0.0
10	1205.50000	474.69995	13.35000	77.53999	0.11260	1667.12988	0.88801
10	1206.89990	475.09985	13.36000	77.60999	0.11280	1671.12988	0.88749
10	1206.89990	475.29980	13.34000	77.67999	0.11310	1675.12988	0.88775
10	1207.19995	476.29980	13.32000	77.70999	0.11330	1679.12988	0.89002
10	1208.39990	476.89990	13.30000	77.73999	0.11340	1687.12988	0.89028
10	1208.39990	476.39990	13.28000	77.75000	0.11380	1691.12988	0.88906
10	1208.09985	476.19995	13.28000	77.79999	0.11390	1695.12988	0.88846
10	1207.19995	476.39990	13.27000	77.79999	0.11400	1699.12988	0.88993
10	1206.89990	477.39990	13.27000	77.82999	0.11410	1703.12988	0.89350
10	1219.29980	493.39990	13.31000	77.81999	0.11380	1706.69995	0.0
10	1163.29980	473.00000	13.01000	77.09000	0.11420	2069.12036	0.0
10	1163.59985	471.59985	13.04000	77.20000	0.11430	2073.11987	0.0
10	1179.09985	478.59985	13.05000	77.26999	0.11440	2077.12036	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1197.19995	482.19995	13.06000	77.37000	0.11460	2081.12109	0.0
10	1238.19995	513.50000	13.10000	77.50000	0.11460	2085.12061	0.0
10	1237.09985	507.09985	13.08000	77.53000	0.11490	2089.11987	0.0
10	1238.19995	505.79980	13.01000	77.51999	0.11550	2093.12061	0.0
10	1238.00000	506.39990	13.04000	77.54999	0.11530	2097.12012	0.0
10	1238.79980	507.00000	13.02000	77.54999	0.11550	2101.11963	0.0
10	1239.39990	508.50000	13.02000	77.56999	0.11550	2105.12036	0.0

AVERAGE VALUES						
9-14A- 30						
TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA	
0 - 233	13.86461	82.36450	0.12272	34.42307	13	
233 - 1045	13.48161	79.59082	0.11744	472.79956	11	
1045 - 1885	13.31272	77.69719	0.11337	1683.27148	11	
1885 - 2400	13.04299	77.41489	0.11488	2087.11792	10

Figure 7.7.2-14. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-14. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 32		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
12	1188.00000	485.09985	15.51000	81.75999	0.10770	1.50000	0.0
12	1240.29980	572.00000	14.39000	83.98000	0.12250	11.50000	0.0
12	1222.19995	561.09985	14.12000	83.73000	0.12410	19.50000	0.0
12	1213.39990	549.19995	14.07000	83.45000	0.12370	23.50000	0.0
12	1212.79980	549.89990	14.03000	83.46999	0.12420	27.50000	0.0
12	1212.79980	550.79980	13.97000	83.48999	0.12480	31.50000	0.0
12	1211.89990	551.19995	13.92000	83.48000	0.12510	35.50000	0.0
12	1211.89990	551.79980	13.87000	83.48999	0.12570	39.50000	0.0
12	1211.29980	552.09985	13.85000	83.53000	0.12590	43.50000	0.0
12	1211.09985	552.79980	13.78000	83.53000	0.12660	47.50000	0.0
12	1210.50000	552.79980	13.77000	83.48999	0.12660	51.50000	0.0
12	1210.19995	553.09985	13.72000	83.48000	0.12700	55.50000	0.0
12	1210.19995	553.09985	13.67000	83.43999	0.12730	59.50000	0.0
12	1245.50000	545.19995	14.03000	79.67999	0.11310	452.86694	0.0
12	1228.59985	539.29980	13.95000	79.60999	0.11360	472.86694	0.0
12	1216.00000	531.79980	13.91000	79.35999	0.11320	476.86694	0.0
12	1204.59985	539.89990	14.03000	75.59000	0.10180	1663.12988	0.0
12	1214.00000	541.00000	13.99000	75.65999	0.10230	1667.12988	0.0
12	1217.19995	542.69995	13.97000	75.67000	0.10250	1671.12988	0.0
12	1217.79980	542.79980	13.93000	75.92000	0.10350	1675.12988	0.0
12	1217.50000	543.00000	13.88000	75.95000	0.10390	1679.12988	0.0
12	1218.69995	544.19995	13.86000	75.90999	0.10390	1683.12988	0.0
12	1218.69995	544.00000	13.85000	75.87000	0.10390	1687.12988	0.0
12	1218.69995	544.09985	13.83000	75.82999	0.10390	1695.12988	0.0
12	1217.79980	544.09985	13.81000	75.92000	0.10430	1699.12988	0.0
12	1217.50000	544.50000	13.81000	75.89000	0.10430	1703.12988	0.0
12	1218.39990	545.50000	13.80000	75.87000	0.10430	1706.69995	0.0
12	1174.69995	518.50000	14.09000	75.92000	0.10230	2069.12036	0.0
12	1169.89990	505.00000	13.91000	75.95000	0.10370	2073.11987	0.0
12	1181.19995	508.69995	13.89000	75.92000	0.10370	2077.12036	0.0
12	1229.79980	534.09985	13.89000	76.07999	0.10410	2085.12061	0.0
12	1231.50000	535.79980	13.85000	76.06999	0.10440	2089.11987	0.0
12	1230.39990	532.69995	13.80000	76.03000	0.10470	2093.12061	0.0
12	1231.50000	536.00000	13.80000	76.03000	0.10480	2097.12012	0.0
12	1233.00000	537.29980	13.78000	76.00000	0.10480	2101.11963	0.0
12	1233.89990	538.79980	13.73000	76.01999	0.10520	2105.12036	0.0

AVERAGE VALUES					
9-14A- 32	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	14.05153	83.40918	0.12394	34.42307	13
233 - 1045	13.96333	79.54999	0.11330	467.53345	3
1045 - 1885	13.88726	75.82536	0.10351	1684.54419	11
1885 - 2400	13.85999	76.00211	0.10419	2087.78418	9

Figure 7.7.2-15. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.2-15. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 39		*** NORMALIZED TO TC=520 TH=1220 ***				TIME (HRS)	P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
14	1221.59985	544.79980	14.41000	82.95000	0.11940	11.50000	0.0
14	1214.59985	537.50000	14.18000	82.60999	0.12030	19.50000	0.0
14	1211.89990	532.79980	14.12000	82.48000	0.12040	23.50000	0.0
14	1210.79980	532.39990	14.08000	82.45000	0.12070	27.50000	0.0
14	1210.50000	533.09985	14.04000	82.42999	0.12100	31.50000	0.0
14	1209.59985	533.09985	14.00000	82.43999	0.12130	35.50000	0.0
14	1209.89990	533.39990	13.94000	82.39000	0.12170	39.50000	0.0
14	1209.89990	533.69995	13.89000	82.42000	0.12230	43.50000	0.0
14	1209.59985	534.39990	13.87000	82.46999	0.12260	47.50000	0.0
14	1209.00000	534.09985	13.81000	82.40999	0.12300	51.50000	0.0
14	1209.00000	534.09985	13.77000	82.34999	0.12310	55.50000	0.0
14	1209.29980	534.39990	13.75000	82.31000	0.12320	59.50000	0.0
14	1220.39990	533.09985	14.43000	80.64999	0.11270	456.86694	0.0
14	1220.19995	531.50000	14.37000	80.62000	0.11300	460.86694	0.0
14	1219.89990	531.29980	14.36000	80.59999	0.11310	464.86694	0.0
14	1216.00000	527.39990	14.35000	80.56000	0.11310	468.86694	0.0
14	1223.39990	524.69995	14.47000	80.57999	0.11220	472.86694	0.0
14	1219.00000	526.09985	14.42000	80.70000	0.11290	476.86694	0.0
14	1220.39990	527.79980	14.35000	80.73999	0.11360	480.86694	0.0
14	1220.19995	527.50000	14.34000	80.71999	0.11360	484.86694	0.0
14	1220.19995	527.50000	14.30000	80.70999	0.11390	488.86694	0.0
14	1220.39990	528.19995	14.27000	80.68999	0.11400	492.13281	0.0
14	1226.00000	553.29980	14.68000	78.62999	0.10530	1663.12988	1.10377
14	1225.69995	553.79980	14.50000	78.71999	0.10680	1667.12988	1.10559
14	1226.89990	555.19995	14.27000	78.95000	0.10920	1675.12988	1.10863
14	1226.59985	555.59985	14.19000	78.89999	0.10970	1679.12988	1.11145
14	1227.19995	556.79980	14.15000	78.87000	0.10990	1687.12988	1.11460
14	1227.19995	556.59985	14.10000	78.87000	0.11030	1695.12988	1.11302
14	1226.59985	556.69995	14.08000	78.90999	0.11050	1699.12988	1.11504
14	1226.29980	557.29980	14.07000	78.89000	0.11060	1703.12988	1.11830
14	1218.09985	532.39990	14.02000	78.89999	0.11100	1706.69995	0.0
14	1139.59985	478.09985	14.41000	77.95999	0.10550	2069.12036	0.0
14	1154.89990	486.69995	14.45000	78.09999	0.10560	2073.11987	0.0
14	1181.50000	496.50000	14.47000	78.21999	0.10570	2077.12036	0.0
14	1225.69995	521.19995	14.43000	78.45000	0.10660	2085.12061	0.0
14	1225.09985	518.00000	14.35000	78.48000	0.10730	2089.11987	0.0
14	1226.29980	518.39990	14.27000	78.46999	0.10790	2093.12061	0.0
14	1225.39990	519.29980	14.17000	78.49000	0.10860	2097.12012	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1226.00000	520.09985	14.17000	78.45000	0.10860	2101.11963	0.0
14	1225.09985	519.59985	14.12000	78.43999	0.10890	2105.12036	0.0

AVERAGE VALUES						
9-14A- 39	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE (HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	13.98833	82.47574	0.12158	37.16666	12	
233 - 1045	14.36599	80.65695	0.11321	474.79321	10	
1045 - 1885	14.22888	78.84882	0.10926	1686.19214	9	
1885 - 2400	14.31555	78.33549	0.10719	2087.78418	9	

7.7.3 PERFORMANCE TEST DATA

LOT 9 - N-TYPE

$T_H = 1350^{\circ}\text{F}$

$T_C = 520^{\circ}\text{F}$

BATCH	SAMPLE	TOTAL TIME (HR)	FIGURE NUMBER
4B	933	1755	7.7.3-1
	934	2177	7.7.3-2
	935	2177	7.7.3-3
6A	940	2177	7.7.3-4
	941	2177	7.7.3-5
	942	2177	7.7.3-6
7B	933	2177	7.7.3-7
	934	2177	7.7.3-8
	935	1825	7.7.3-9
11B	33	2238	7.7.3-10
	34	2234	7.7.3-11
	35	2202	7.7.3-12
14A	40	2204	7.7.3-13
	41	2216	7.7.3-14
	42	2242	7.7.3-15

Figure 7.7.3-1. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 48-933		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
2	1291.50000	565.39990	17.14000	97.51999	0.13870	421.71680	0.0
2	1307.59985	585.59985	16.98000	98.28000	0.14220	423.71680	0.0
2	1307.89990	585.89990	16.81999	98.29999	0.14360	427.71680	0.0
2	1307.89990	585.89990	16.81999	98.29999	0.14360	427.71680	0.0
2	1309.29980	588.19995	16.62000	98.32999	0.14540	435.71680	0.0
2	1310.19995	588.39990	16.51999	98.28000	0.14620	439.71680	0.0
2	1311.59985	587.89990	16.37000	98.23999	0.14740	443.71680	0.0
2	1311.89990	587.69995	16.29999	98.12999	0.14770	447.71680	0.0
2	1314.09985	586.59985	16.37000	98.09999	0.14700	451.71680	0.0
2	1314.09985	583.59985	16.25000	97.92000	0.14750	455.71680	0.0
2	1314.69995	586.79980	16.17000	97.95999	0.14830	459.71680	0.0
2	1315.50000	588.50000	16.17000	97.98999	0.14850	463.71680	0.0
2	1316.89990	590.79980	16.14999	97.98999	0.14860	467.71680	0.0
2	1317.50000	591.29980	16.17000	98.00999	0.14850	471.29980	0.0
2	1216.59985	477.59985	16.31999	94.90999	0.13800	1694.62988	0.0
2	1201.29980	552.00000	16.45000	94.92999	0.13690	1698.62988	1.39837
2	1236.19995	564.50000	16.42999	95.10999	0.13770	1702.62988	1.36337
2	1280.29980	557.19995	16.29999	95.45000	0.13970	1706.62988	1.23084
2	1283.79980	545.69995	16.23000	95.45999	0.14030	1711.12988	1.18098
2	1282.89990	543.09985	16.20000	95.42999	0.14050	1714.62988	1.17377
2	1281.79980	542.59985	16.17999	95.39000	0.14060	1718.62988	1.17460
2	1281.19995	542.00000	16.14999	95.37000	0.14080	1722.62988	1.17236
2	1280.89990	539.69995	16.10999	95.32999	0.14110	1726.62988	1.16515
2	1280.09985	538.09985	16.09999	95.31999	0.14110	1730.62988	1.16132
2	1282.09985	541.09985	16.03000	95.35999	0.14190	1734.62988	1.16886
2	1289.19995	547.69995	16.09000	95.42000	0.14140	1738.62988	1.17833
2	1291.50000	550.89990	15.86000	95.34000	0.14330	1742.62988	1.18626
2	1290.00000	548.19995	15.84000	95.28999	0.14330	1746.62988	1.17845
2	1288.29980	543.69995	15.85000	95.28000	0.14320	1750.62988	1.16612
2	1288.89990	549.50000	15.83000	95.28000	0.14340	1754.62988	1.18610
2	1289.50000	545.79980	15.87000	95.31000	0.14310	1758.62988	1.17103
2	1329.00000	586.59985	15.77000	95.23000	0.14380	2109.13037	1.24718
2	1301.39990	559.50000	15.64000	95.04999	0.14440	2113.12988	1.19834
2	1298.29980	553.00000	15.66000	95.06000	0.14430	2117.13062	1.18085
2	1302.29980	565.09985	15.63000	95.04999	0.14450	2121.13013	1.21735
2	1301.09985	564.89990	15.60000	95.03000	0.14470	2125.12964	1.21904
2	1301.39990	563.50000	15.58000	94.98999	0.14480	2129.12915	1.21375
2	1296.59985	552.39990	15.64000	95.07999	0.14450	2133.12964	1.18152
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
2	1296.59985	555.19995	15.59000	95.03999	0.14480	2149.12988	1.19177
2	1295.69995	553.00000	15.62000	95.03999	0.14460	2153.12939	1.18622
2	1296.29980	554.89990	15.58000	95.01999	0.14490	2157.13013	1.19063
2	1293.69995	552.09985	15.54000	95.03999	0.14530	2169.13086	0.0
2	1294.00000	552.09985	15.55000	95.03999	0.14520	2173.13037	1.18531
2	1294.89990	553.89990	15.69000	95.17999	0.14430	2177.12988	1.19059
AVERAGE VALUES							
9- 48-933	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA		
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)			
(HRS)							
233 - 1045	16.48927	98.09633	0.14594	445.54346	14		
1045 - 1885	16.10820	95.29282	0.14096	1726.65820	17		
1885 - 2400	15.62230	95.06523	0.14462	2140.51343	13

Figure 7.7.3-2. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-2. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 48-934		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
4	1295.39990	648.19995	16.20000	103.29999	0.16460	22.20000	0.0
4	1312.39990	576.79980	17.17000	97.42999	0.13820	421.71680	0.0
4	1327.09985	605.59985	16.73999	98.07999	0.14360	423.71680	0.0
4	1327.09985	605.19995	15.87000	97.25000	0.14900	427.71680	0.0
4	1327.09985	605.19995	15.87000	97.25000	0.14900	427.71680	0.0
4	1331.59985	605.50000	14.87000	94.67000	0.15070	435.71680	0.0
4	1332.39990	606.00000	14.96000	94.21999	0.14840	439.71680	0.0
4	1334.39990	607.09985	14.96000	94.14000	0.14810	443.71680	0.0
4	1334.09985	607.39990	14.92000	93.92999	0.14790	447.71680	0.0
4	1334.39990	607.19995	14.94000	93.76999	0.14720	451.71680	0.0
4	1334.39990	607.09985	14.95000	93.59999	0.14650	455.71680	0.0
4	1334.09985	607.29980	15.00000	93.76999	0.14660	459.71680	0.0
4	1334.39990	607.50000	15.02000	93.64999	0.14600	463.71680	0.0
4	1335.50000	609.39990	14.95000	93.50999	0.14620	467.71680	0.0
4	1335.79980	610.09985	14.58000	93.56999	0.15010	471.29980	0.0
4	1214.59985	476.29980	15.60000	86.53000	0.12000	1694.62988	0.0
4	1261.69995	570.00000	15.22000	87.39999	0.12550	1698.62988	1.32384
4	1272.89990	568.29980	14.95000	87.28000	0.12740	1702.62988	1.29078
4	1272.89990	568.09985	14.79000	87.40999	0.12910	1706.62988	1.28971
4	1272.00000	546.69995	14.68000	87.95000	0.13180	1711.12988	1.20807
4	1272.59985	545.50000	14.55000	87.89999	0.13270	1714.62988	1.20199
4	1275.19995	547.29980	14.49000	87.75000	0.13280	1718.62988	1.20399
4	1275.19995	547.19995	14.39000	87.78999	0.13390	1722.62988	1.20414
4	1274.89990	546.50000	14.31000	87.79999	0.13470	1726.62988	1.20161
4	1274.59985	545.29980	14.23000	87.78000	0.13530	1730.62988	1.19735
4	1275.50000	546.00000	14.13000	87.78999	0.13630	1734.62988	1.19772
4	1282.89990	551.50000	14.08000	87.84999	0.13700	1738.62988	0.0
4	1284.89990	552.59985	13.78000	87.81999	0.13990	1742.62988	1.20500
4	1284.89990	552.69995	13.73000	87.75999	0.14030	1746.62988	1.20533
4	1284.59985	550.89990	13.68000	87.71999	0.14070	1750.62988	1.19847
4	1284.09985	550.19995	13.56000	87.68999	0.14170	1754.62988	1.19679
4	1285.79980	551.00000	13.54000	87.64000	0.14180	1758.62988	1.19662
4	1281.50000	520.19995	14.25000	87.45000	0.13410	2109.13037	0.0
4	1262.79980	487.29980	14.01000	87.20999	0.13580	2113.12988	0.0
4	1262.00000	484.09985	14.02000	87.14000	0.13540	2117.13062	0.0
4	1258.79980	480.89990	13.98000	87.14999	0.13580	2121.13013	0.0
4	1257.89990	481.39990	14.02000	87.06000	0.13520	2125.12964	0.0
4	1258.79980	482.89990	14.04000	87.01999	0.13480	2129.12915	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
4	1260.19995	483.79980	14.08000	87.12999	0.13470	2133.12964	0.0
4	1259.69995	484.09985	14.09000	87.12000	0.13460	2149.12988	0.0
4	1259.39990	484.29980	14.12000	87.09000	0.13430	2153.12939	0.0
4	1260.19995	484.89990	14.13000	87.03999	0.13400	2157.13013	0.0
4	1259.39990	484.00000	14.15000	87.09999	0.13400	2169.13086	0.0
4	1259.09985	484.19995	14.17000	87.09999	0.13380	2173.13037	0.0
4	1260.50000	485.00000	14.13000	87.20000	0.13460	2177.12988	0.0

AVERAGE VALUES						
9- 48-934		RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
TIME RANGE		(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233		16.20000	103.29999	0.16460	22.20000	1
233 - 1045		15.34285	94.91702	0.14696	445.54346	14
1045 - 1885		14.33588	87.63870	0.13417	1726.65820	17
1885 - 2400		14.09153	87.13910	0.13470	2140.51343	13

Figure 7.7.3-3. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-3. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 48-935		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1356.89990	548.59985	16.23999	97.81999	0.14730	2.20000	0.0
6	1378.19995	598.29980	15.36000	99.03000	0.15960	6.20000	0.0
6	1378.19995	598.29980	15.36000	99.03000	0.15960	10.20000	0.0
6	1378.19995	600.29980	14.28000	97.87999	0.16770	14.20000	0.0
6	1359.09985	585.09985	14.05000	97.23999	0.16820	18.20000	0.0
6	1346.09985	570.19995	14.02000	96.42999	0.16580	22.20000	0.0
6	1349.09985	569.19995	13.88000	94.40999	0.16060	26.20000	0.0
6	1351.39990	569.59985	14.13000	93.87000	0.15590	30.20000	0.0
6	1352.19995	568.89990	14.28000	93.84000	0.15410	34.20000	0.0
6	1351.09985	569.19995	14.42000	94.29999	0.15410	38.20000	0.0
6	1353.29980	570.19995	14.22000	94.48999	0.15700	42.20000	0.0
6	1351.09985	568.89990	14.01000	93.92999	0.15740	46.20000	0.0
6	1378.69995	564.09985	14.26000	89.14000	0.13930	421.71680	0.0
6	1395.19995	596.39990	13.62000	90.06999	0.14890	423.71680	0.0
6	1394.59985	599.00000	13.32000	90.00999	0.15200	427.71680	0.0
6	1394.59985	599.00000	13.32000	90.00999	0.15200	427.71680	0.0
6	1394.09985	604.09985	13.83000	90.07999	0.14670	435.71680	0.0
6	1394.39990	606.50000	13.87000	90.03999	0.14610	439.71680	0.0
6	1396.00000	607.39990	13.87000	89.96999	0.14600	443.71680	0.0
6	1395.69995	608.19995	13.91000	89.92000	0.14530	447.71680	0.0
6	1363.00000	590.00000	14.02000	89.87999	0.14410	451.71680	0.0
6	1363.29980	592.19995	13.77000	89.73999	0.14620	455.71680	0.0
6	1363.00000	591.59985	13.66000	89.53999	0.14670	459.71680	0.0
6	1363.00000	592.69995	13.71000	89.56999	0.14630	463.71680	0.0
6	1336.00000	577.39990	13.70000	89.31999	0.14560	467.71680	0.0
6	1335.79980	578.29980	13.69000	89.31000	0.14570	471.29980	0.0
6	1353.59985	597.39990	10.86000	79.60999	0.14590	1698.62988	1.24170
6	1353.59985	600.00000	10.91000	80.03000	0.14680	1702.62988	1.25149
6	1351.59985	598.79980	10.93000	80.37000	0.14780	1706.62988	1.25042
6	1326.50000	583.29980	11.41000	81.00999	0.14380	1711.12988	1.23966
6	1323.09985	579.19995	11.34000	81.21999	0.14550	1714.62988	1.23096
6	1322.59985	580.89990	11.20000	81.32999	0.14760	1718.62988	1.23826
6	1321.69995	580.19995	11.11000	81.32999	0.14890	1722.62988	1.23774
6	1321.50000	579.39990	11.08000	81.39000	0.14950	1726.62988	1.23452
6	1320.59985	578.50000	11.07000	81.39000	0.14960	1730.62988	1.23331
6	1321.19995	579.50000	11.21000	81.50999	0.14820	1734.62988	1.23500
6	1296.00000	566.79980	11.49000	81.73999	0.14540	1738.62988	1.23639
6	1297.19995	567.39990	11.35000	81.82999	0.14750	1742.62988	1.23638

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1295.69995	565.69995	11.27000	81.78000	0.14830	1746.62988	1.23275
6	1295.19995	564.50000	11.20000	81.70000	0.14900	1750.62988	1.22937
6	1294.29980	564.29980	11.07000	81.59999	0.15040	1754.62988	1.22976
6	1294.89990	564.79980	11.13000	81.59999	0.14950	1758.62988	1.23045
6	1338.50000	587.79980	10.65000	80.78999	0.15330	2109.13037	1.23430
6	1273.19995	500.89990	10.89000	81.03999	0.15080	2113.12988	0.0
6	1266.00000	488.39990	10.82000	80.95000	0.15140	2117.13062	0.0
6	1262.59985	485.50000	10.76000	80.95000	0.15220	2121.13013	0.0
6	1261.69995	485.59985	10.73000	80.98000	0.15290	2125.12964	0.0
6	1262.29980	486.29980	10.68000	80.98999	0.15350	2129.12915	0.0
6	1264.29980	488.89990	10.71000	81.06999	0.15340	2133.12964	0.0
6	1262.59985	488.39990	10.55000	80.96999	0.15540	2149.12988	0.0
6	1262.00000	488.29980	10.50000	80.90999	0.15580	2153.12939	0.0
6	1260.50000	487.79980	10.48000	80.89999	0.15610	2157.13013	0.0
6	1260.19995	487.39990	10.36000	80.75999	0.15750	2169.13086	0.0
6	1258.50000	486.89990	10.34000	80.73000	0.15760	2173.13037	0.0
6	1261.09985	488.50000	10.41000	80.82999	0.15690	2177.12988	0.0

AVERAGE VALUES

9- 48-935					
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	14.52082	96.02242	0.15894	24.19998	12
233 - 1045	13.75356	89.75702	0.14649	445.54346	14
1045 - 1885	11.16437	81.21489	0.14773	1728.66016	16
1885 - 2400	10.60615	80.91301	0.15437	2140.51343	13

Figure 7.7.3-4. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-4. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 6A-940		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1358.89990	530.19995	16.76999	96.89000	0.14000	2.20000	0.0
8	1380.59985	575.69995	15.68000	98.42000	0.15440	6.20000	0.0
8	1380.59985	577.29980	14.98000	97.60999	0.15900	10.20000	0.0
8	1385.59985	578.89990	14.73000	96.43999	0.15780	14.20000	0.0
8	1372.89990	567.59985	14.64000	95.56000	0.15590	18.20000	0.0
8	1354.39990	540.79980	14.71000	94.32999	0.15130	22.20000	0.0
8	1348.29980	536.00000	14.79000	94.10999	0.14970	26.20000	0.0
8	1347.69995	536.00000	14.92000	94.07999	0.14830	30.20000	0.0
8	1347.19995	534.39990	14.97000	93.90999	0.14730	34.20000	0.0
8	1347.19995	534.69995	15.02000	93.89999	0.14680	38.20000	0.0
8	1348.89990	536.29980	15.05000	93.93999	0.14660	42.20000	0.0
8	1340.50000	531.79980	15.08000	93.70000	0.14560	46.20000	0.0
8	1391.59985	549.09985	15.82000	92.32999	0.13470	21.71680	0.0
8	1406.39990	580.79980	15.49000	93.31000	0.14050	23.71680	0.0
8	1405.29980	580.89990	15.38000	93.14999	0.14110	27.71680	0.0
8	1405.29980	580.89990	15.38000	93.14999	0.14110	427.71680	0.0
8	1405.79980	582.69995	15.35000	92.95999	0.14070	435.71680	0.0
8	1406.09985	583.50000	15.34000	92.82999	0.14040	439.71680	0.0
8	1407.69995	584.39990	15.33000	92.75999	0.14030	443.71680	0.0
8	1407.50000	585.00000	15.32000	92.67999	0.14010	447.71680	0.0
8	1378.19995	569.69995	15.29000	92.32999	0.13940	451.71680	0.0
8	1378.69995	570.59985	15.23000	92.25999	0.13970	455.71680	0.0
8	1379.00000	570.79980	15.26000	92.18999	0.13920	459.71680	0.0
8	1382.29980	570.50000	15.33000	91.95999	0.13790	463.71680	0.0
8	1351.89990	555.09985	15.21000	91.40999	0.13730	467.71680	0.0
8	1348.89990	555.50000	15.23000	91.59000	0.13770	471.29980	0.0
8	1252.69995	444.00000	13.17000	86.15999	0.14090	1694.62988	0.0
8	1248.69995	536.89990	13.33000	86.39999	0.14000	1698.62988	1.21739
8	1306.79980	551.39990	13.31000	86.67999	0.14110	1702.62988	1.15941
8	1333.50000	548.19995	13.17000	86.98000	0.14360	1706.62988	1.10547
8	1310.50000	536.00000	13.12000	86.89000	0.14390	1711.12988	1.10268
8	1313.29980	533.69995	13.01000	86.64000	0.14420	1714.62988	0.0
8	1311.59985	533.59985	12.93000	86.53999	0.14480	1718.62988	0.0
8	1313.29980	532.39990	12.89000	86.48000	0.14500	1722.62988	0.0
8	1305.39990	528.59985	12.91000	86.45999	0.14480	1726.62988	0.0
8	1307.09985	528.09985	12.87000	86.39000	0.14500	1730.62988	0.0
8	1316.09985	531.19995	12.84000	86.28999	0.14500	1734.62988	0.0
8	1289.50000	521.79980	12.81000	86.23000	0.14510	1738.62988	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1278.09985	516.50000	12.63000	86.32999	0.14750	1742.62988	0.0
8	1276.89990	515.29980	12.61000	86.31999	0.14770	1746.62988	0.0
8	1274.89990	512.69995	12.62000	86.34000	0.14770	1750.62988	0.0
8	1274.29980	512.79980	12.55000	86.31999	0.14840	1754.62988	0.0
8	1267.69995	491.79980	12.67000	85.95000	0.14580	2109.13037	0.0
8	1296.00000	521.19995	12.74000	85.98999	0.14510	2113.12988	0.0
8	1304.79980	527.19995	12.73000	85.93999	0.14510	2117.13062	0.0
8	1307.09985	528.89990	12.73000	85.98000	0.14520	2121.13013	0.0
8	1306.79980	529.69995	12.69000	85.95000	0.14550	2125.12964	0.0
8	1307.89990	530.89990	12.67000	85.90999	0.14560	2129.12915	0.0
8	1298.00000	505.50000	12.67000	85.92999	0.14570	2133.12964	0.0
8	1297.19995	505.39990	12.59000	85.79999	0.14620	2149.12988	0.0
8	1297.19995	505.50000	12.57000	85.76999	0.14630	2153.12939	0.0
8	1297.69995	505.89990	12.54000	85.71999	0.14650	2157.13013	0.0
8	1297.19995	505.39990	12.54000	85.64999	0.14620	2169.13086	0.0
8	1297.19995	505.69995	12.51000	85.60999	0.14640	2173.13037	0.0
8	1297.69995	506.39990	12.55000	85.60999	0.14610	2177.12988	0.0

AVERAGE VALUES

9- 6A-940 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
0 - 233	15.11166	95.24074	0.15022	24.19998	12
233 - 1045	15.35428	92.49345	0.13929	445.54346	14
1045 - 1885	12.92312	86.46552	0.14467	1724.66016	16
1885 - 2400	12.63076	85.83144	0.14582	2140.51343	13

Figure 7.7.3-5. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-5. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 6A-941		*** NORMALIZED TO TC=520 TH=1350 ***				TIME (HRS)	P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
10	1335.79980	521.79980	16.31000	97.15999	0.14470	2.20000	0.0
10	1368.29980	575.69995	15.20000	98.87000	0.16080	6.20000	0.0
10	1366.59985	576.69995	14.46000	98.53000	0.16780	10.20000	0.0
10	1366.29980	577.29980	13.88000	98.03000	0.17310	14.20000	0.0
10	1354.69995	567.59985	13.61000	97.43999	0.17440	18.20000	0.0
10	1346.09985	547.00000	13.64000	96.56999	0.17090	22.20000	0.0
10	1339.89990	542.39990	13.68000	96.42000	0.16990	26.20000	0.0
10	1339.89990	543.09985	13.68000	96.42999	0.16990	30.20000	0.0
10	1341.29980	542.79980	13.64000	96.34000	0.17010	34.20000	0.0
10	1341.89990	543.39990	13.59000	96.28000	0.17050	38.20000	0.0
10	1342.69995	544.69995	13.53000	96.18999	0.17090	42.20000	0.0
10	1344.39990	545.29980	13.47000	96.03999	0.17120	46.20000	0.0
10	1377.89990	536.09985	15.99000	92.20999	0.13290	421.71680	0.0
10	1396.29980	570.69995	15.58000	93.37000	0.13990	423.71680	0.0
10	1396.50000	571.50000	15.35000	93.56000	0.14250	427.71680	0.0
10	1396.50000	571.50000	15.35000	93.56000	0.14250	427.71680	0.0
10	1397.89990	572.69995	15.09000	93.70999	0.14550	435.71680	0.0
10	1399.00000	573.59985	15.01000	93.78999	0.14650	439.71680	0.0
10	1401.69995	574.89990	15.00000	93.78000	0.14660	443.71680	0.0
10	1403.09985	575.59985	14.91000	93.70000	0.14720	447.71680	0.0
10	1379.00000	563.69995	15.01000	93.34999	0.14510	451.71680	0.0
10	1380.89990	564.00000	14.97000	93.42999	0.14580	455.71680	0.0
10	1381.69995	564.50000	14.95000	93.42000	0.14590	459.71680	0.0
10	1382.29980	564.69995	14.90000	93.37999	0.14630	463.71680	0.0
10	1352.69995	551.19995	14.93000	93.09999	0.14520	467.71680	0.0
10	1352.19995	551.89990	14.90000	93.09999	0.14550	471.29980	0.0
10	1333.00000	553.89990	14.58000	89.67000	0.13790	1698.62988	1.12480
10	1352.19995	554.89990	14.48000	89.98000	0.13980	1702.62988	0.0
10	1355.19995	556.00000	14.42000	90.07999	0.14070	1706.62988	0.0
10	1306.79980	524.79980	14.30000	90.09999	0.14190	1711.12988	0.0
10	1293.69995	518.39990	14.31000	90.00999	0.14160	1714.62988	0.0
10	1295.39990	516.09985	14.29000	90.06999	0.14190	1718.62988	0.0
10	1295.39990	514.29980	14.27000	90.07999	0.14220	1722.62988	0.0
10	1296.29980	514.29980	14.26000	90.06999	0.14220	1726.62988	0.0
10	1296.00000	513.59985	14.25000	90.09999	0.14250	1730.62988	0.0
10	1296.29980	514.89990	14.28000	90.15999	0.14230	1734.62988	0.0
10	1284.29980	509.59985	14.26000	90.18999	0.14260	1738.62988	0.0
10	1284.09985	509.00000	14.05000	90.20999	0.14490	1742.62988	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1283.79980	508.59985	14.04000	90.21999	0.14490	1746.62988	0.0
10	1284.29980	508.00000	14.00000	90.20999	0.14530	1750.62988	0.0
10	1284.29980	508.69995	14.00000	90.20000	0.14530	1754.62988	0.0
10	1309.09985	521.89990	13.97000	90.20000	0.14560	2109.13037	0.0
10	1311.89990	537.50000	14.01000	90.21999	0.14530	2113.12988	1.10494
10	1312.69995	540.00000	13.99000	90.20999	0.14540	2117.13062	1.11162
10	1313.00000	539.09985	13.95000	90.23000	0.14590	2121.13013	1.10782
10	1312.69995	540.00000	13.94000	90.21999	0.14600	2125.12964	1.11196
10	1313.29980	541.00000	13.94000	90.23999	0.14610	2129.12915	1.11442
10	1310.50000	533.09985	13.91000	90.26999	0.14650	2149.12988	0.0
10	1310.19995	532.89990	13.91000	90.28999	0.14650	2153.12939	0.0
10	1310.69995	533.19995	13.92000	90.29999	0.14640	2157.13013	0.0
10	1311.89990	534.59985	13.92000	90.32999	0.14650	2169.13086	0.0
10	1311.59985	534.69995	13.93000	90.34999	0.14650	2173.13037	0.0
10	1311.59985	536.69995	13.93000	90.37000	0.14660	2177.12988	1.10309

AVERAGE VALUES					
9- 6A-941	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
TIME RANGE (HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	14.05749	97.02487	0.16785	24.19998	12
233 - 1045	15.13857	93.38989	0.14410	445.54346	14
1045 - 1885	14.25266	90.08990	0.14240	1726.66211	15
1885 - 2400	13.94333	90.26906	0.14611	2141.12891	12

Figure 7.7.3-6. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

Pages 7-91 and 7-92 were not found in original document

TABLE 7.7.3-7. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 7B-933		*** NORMALIZED TO TC=520 TH=1350 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
14	1340.79980	537.29980	16.78000	98.04999	0.14330	2.20000	0.0
14	1372.39990	597.00000	15.62000	99.50000	0.15850	6.20000	0.0
14	1369.59985	598.00000	15.14000	99.35999	0.16310	10.20000	0.0
14	1369.59985	598.00000	15.14000	99.35999	0.16310	14.20000	0.0
14	1351.09985	582.79980	14.43000	98.06999	0.16670	18.20000	0.0
14	1341.09985	567.59985	14.34000	97.20000	0.16470	22.20000	0.0
14	1341.59985	568.29980	14.29000	96.96999	0.16450	26.20000	0.0
14	1342.50000	569.19995	14.28000	96.75000	0.16390	30.20000	0.0
14	1343.79980	569.59985	14.30000	96.28000	0.16210	34.20000	0.0
14	1347.69995	569.89990	14.40000	95.87000	0.15950	38.20000	0.0
14	1349.69995	570.19995	14.42000	95.71999	0.15880	42.20000	0.0
14	1345.19995	567.29980	14.38000	95.39999	0.15820	46.20000	0.0
14	1361.29980	584.39990	16.53000	93.84999	0.13320	421.71680	0.0
14	1378.69995	621.89990	15.97000	95.09000	0.14150	423.71680	0.0
14	1379.00000	625.50000	15.65000	95.23999	0.14490	427.71680	0.0
14	1379.00000	625.50000	15.65000	95.23999	0.14490	427.71680	0.0
14	1378.19995	624.39990	15.75000	95.15999	0.14370	435.71680	0.0
14	1377.59985	624.69995	15.77000	95.15999	0.14360	439.71680	0.0
14	1378.69995	626.00000	15.80000	95.07999	0.14300	443.71680	0.0
14	1378.39990	626.29980	15.79000	95.04999	0.14310	447.71680	0.0
14	1353.29980	610.00000	15.74000	95.12000	0.14370	451.71680	0.0
14	1353.59985	610.09985	15.77000	94.96999	0.14300	455.71680	0.0
14	1353.29980	610.89990	15.73000	94.87000	0.14300	459.71680	0.0
14	1353.29980	610.79980	15.83000	94.90999	0.14230	463.71680	0.0
14	1353.89990	611.89990	15.74000	94.82999	0.14290	467.71680	0.0
14	1352.69995	611.59985	15.85000	95.00000	0.14230	471.29980	0.0
14	1251.59985	491.29980	15.35000	89.59999	0.13080	1694.62988	0.0
14	1339.09985	608.50000	15.43000	90.59999	0.13300	1698.62988	1.31293
14	1339.69995	611.09985	15.31000	90.64999	0.13420	1702.62988	1.32347
14	1342.19995	612.19995	15.28000	90.73999	0.13470	1706.62988	1.32188
14	1316.69995	591.19995	15.16000	90.84000	0.13600	1711.12988	1.28910
14	1313.00000	585.19995	15.16000	90.81999	0.13610	1714.62988	1.27315
14	1311.89990	583.39990	15.14000	90.82999	0.13620	1718.62988	1.26816
14	1311.89990	584.29980	15.11000	90.68999	0.13600	1722.62988	1.27222
14	1312.19995	584.89990	15.12000	90.68999	0.13600	1726.62988	1.27460
14	1311.00000	582.59985	15.11000	90.68999	0.13600	1730.62988	1.26747
14	1310.50000	582.19995	15.14000	90.75999	0.13600	1734.62988	1.26629
14	1296.59985	575.39990	14.91000	90.81000	0.13830	1742.62988	1.26881

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1297.19995	575.29980	14.89000	90.70999	0.13820	1746.62988	1.26789
14	1296.89990	574.00000	14.85000	90.60999	0.13820	1750.62988	1.26210
14	1295.39990	572.89990	14.83000	90.59000	0.13830	1754.62988	1.26071
14	1295.39990	573.69995	14.88000	90.68999	0.13810	1758.62988	1.26350
14	1292.29980	573.00000	15.03000	90.28999	0.13560	2109.13037	1.26848
14	1293.50000	575.00000	15.01000	90.45999	0.13630	2113.12988	1.27383
14	1293.50000	575.39990	14.96000	90.31999	0.13640	2117.13062	1.27596
14	1294.29980	575.79980	14.92000	90.28999	0.13660	2121.13013	1.27544
14	1293.69995	576.09985	14.87000	90.17999	0.13670	2125.12964	1.27757
14	1294.00000	576.79980	14.88000	90.17000	0.13660	2129.12915	1.27903
14	1294.89990	578.39990	14.91000	90.37999	0.13690	2133.12964	1.28424
14	1293.50000	577.09985	14.83000	90.25000	0.13730	2149.12988	1.28318
14	1294.29980	578.09985	14.80000	90.06000	0.13700	2157.13013	1.28397
14	1296.00000	580.50000	14.82000	90.04999	0.13680	2169.13086	1.29057
14	1295.69995	580.50000	14.80000	90.00000	0.13680	2173.13037	1.29178
14	1295.19995	579.59985	14.85000	90.12999	0.13670	2177.12988	1.28841

AVERAGE VALUES						
9- 7B-933		RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
TIME RANGE (HRS)						
0 - 233		14.79333	97.37741	0.16053	24.19998	12
233 - 1045		15.82642	94.96919	0.14251	445.54346	14
1045 - 1885		15.10437	90.64490	0.13601	1725.91016	16
1885 - 2400		14.88999	90.21490	0.13664	2139.46216	12

Figure 7.7.3-8. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-8. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 7B-934		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
16	1334.39990	566.29980	17.15999	99.14000	0.14320	18.20000	0.0
16	1338.29980	552.79980	16.60999	98.76999	0.14690	22.20000	0.0
16	1338.79980	552.79980	16.15999	98.59000	0.15040	26.20000	0.0
16	1335.50000	554.69995	15.87000	98.14999	0.15170	30.20000	0.0
16	1333.19995	554.69995	15.39000	97.64999	0.15490	34.20000	0.0
16	1335.50000	558.29980	14.99000	96.82999	0.15630	38.20000	0.0
16	1337.39990	558.59985	14.48000	95.43999	0.15730	42.20000	0.0
16	1334.39990	558.59985	14.15000	94.53000	0.15790	46.20000	0.0
16	1342.50000	545.89990	15.68000	90.53000	0.13060	421.71680	0.0
16	1357.19995	575.19995	15.43000	91.65999	0.13610	423.71680	0.0
16	1358.00000	576.59985	15.25000	91.79999	0.13820	427.71680	0.0
16	1358.00000	576.59985	15.25000	91.79999	0.13820	427.71680	0.0
16	1358.29980	577.89990	15.14000	91.81999	0.13920	435.71680	0.0
16	1358.59985	578.50000	15.05000	91.76999	0.13990	439.71680	0.0
16	1359.09985	579.19995	15.03000	91.70000	0.13980	443.71680	0.0
16	1358.29980	579.39990	15.04000	91.67000	0.13970	447.71680	0.0
16	1341.89990	570.29980	14.96000	91.37000	0.13950	451.71680	0.0
16	1335.50000	566.79980	14.94000	91.20999	0.13920	455.71680	0.0
16	1335.19995	567.19995	15.34000	88.76999	0.12840	459.71680	0.0
16	1334.89990	567.69995	14.96000	91.20000	0.13900	463.71680	0.0
16	1334.09985	569.39990	14.93000	91.21999	0.13930	471.29980	0.0
16	1247.19995	469.29980	14.21000	88.00000	0.13620	1694.62988	0.0
16	1269.19995	572.59985	14.57000	88.43999	0.13420	1698.62988	1.31827
16	1334.39990	580.89990	14.52000	88.98999	0.13640	1702.62988	1.21569
16	1339.69995	583.39990	14.52000	89.07999	0.13660	1706.62988	1.21530
16	1298.29980	546.69995	14.44000	89.06000	0.13730	1711.12988	1.15865
16	1290.29980	536.19995	14.39000	89.06999	0.13780	1714.62988	1.13603
16	1287.19995	533.19995	14.36000	88.92999	0.13770	1718.62988	1.13147
16	1286.89990	533.19995	14.36000	88.92999	0.13770	1722.62988	1.13240
16	1287.19995	533.00000	14.35000	88.85999	0.13760	1726.62988	1.13158
16	1286.89990	531.09985	14.35000	88.78999	0.13740	1730.62988	1.12531
16	1286.29980	532.09985	14.36000	88.81999	0.13740	1734.62988	1.12901
16	1294.00000	537.00000	14.38000	88.85999	0.13730	1738.62988	1.13284
16	1294.89990	538.09985	14.17000	88.82999	0.13920	1742.62988	1.13540
16	1294.59985	537.79980	14.16000	88.78999	0.13920	1746.62988	1.13447
16	1293.69995	536.19995	14.18000	88.89999	0.13930	1750.62988	1.13068
16	1293.50000	535.59985	14.15000	88.81000	0.13940	1754.62988	1.12874
16	1296.59985	540.00000	14.24000	88.82999	0.13860	1758.62988	1.13887

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
16	1306.79980	558.69995	14.04000	86.42000	0.13300	2109.13037	1.18538
16	1295.69995	551.89990	14.01000	86.48000	0.13350	2113.12988	1.18142
16	1294.89990	549.59985	13.96000	86.42000	0.13370	2117.13062	1.17487
16	1295.69995	549.09985	13.95000	86.42999	0.13390	2121.13013	1.17148
16	1295.69995	549.69995	13.93000	86.35999	0.13380	2125.12964	1.17368
16	1296.59985	550.59985	13.95000	86.32999	0.13360	2129.12915	1.17502
16	1296.59985	552.19995	13.96000	86.21999	0.13310	2149.12988	1.18101
16	1296.00000	552.00000	13.97000	86.20000	0.13300	2153.12939	1.18117
16	1296.29980	552.29980	13.97000	86.18999	0.13290	2157.13013	1.18133
16	1295.19995	550.29980	13.96000	86.12999	0.13280	2169.13086	1.17731
16	1294.59985	550.50000	13.98000	86.14999	0.13280	2173.13037	1.17940
16	1294.29980	550.79980	13.98000	86.14999	0.13270	2177.12988	1.18061

AVERAGE VALUES						
9- 7B-934	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	15.60124	97.38739	0.15232	32.19998	8	
233 - 1045	15.15384	91.27065	0.13747	443.83789	13	
1045 - 1885	14.33587	88.82280	0.13761	1726.65820	17	
1885 - 2400	13.97166	86.28992	0.13323	2141.12891	12

Figure 7.7.3-9. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-9. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9- 7B-935		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
2	1323.39990	590.50000	16.95000	97.78999	0.14100	416.77979	0.0
2	1325.09985	592.50000	16.84000	97.76999	0.14190	422.19678	0.0
2	1323.69995	589.89990	16.84000	97.60999	0.14150	424.77979	0.0
2	1324.29980	592.79980	16.75999	97.67000	0.14230	428.77979	0.0
2	1325.09985	592.19995	16.76999	97.62000	0.14210	432.77979	0.0
2	1325.09985	591.50000	16.71999	97.51999	0.14220	436.77979	0.0
2	1329.00000	591.79980	16.73000	97.56999	0.14230	440.77979	0.0
2	1330.39990	593.89990	16.76999	97.56999	0.14190	444.77979	0.0
2	1328.79980	591.29980	16.79999	97.37000	0.14110	448.77979	0.0
2	1329.29980	592.29980	16.90999	97.29999	0.14000	452.77979	0.0
2	1329.89990	589.89990	17.09999	97.28999	0.13840	456.77979	0.0
2	1329.89990	589.50000	17.12999	97.23999	0.13800	460.77979	0.0
2	1328.79980	588.19995	17.12000	97.20999	0.13800	462.77979	0.0
2	1286.89990	570.19995	15.39000	94.09000	0.14380	1777.77979	1.26808
2	1286.29980	571.09985	15.35000	94.01999	0.14400	1779.77979	1.27321
2	1216.00000	443.69995	15.21000	93.96999	0.14510	1783.77979	0.0
2	1215.19995	443.00000	15.16000	93.95000	0.14560	1787.77979	0.0
2	1214.29980	443.39990	15.14000	93.89999	0.14560	1791.77979	0.0
2	1214.29980	443.19995	15.15000	93.89000	0.14550	1795.77979	0.0
2	1214.59985	445.29980	15.12000	93.84999	0.14560	1799.77979	0.0
2	1214.59985	445.29980	15.13000	93.84999	0.14560	1803.77979	0.0
2	1214.00000	445.59985	15.11000	93.85999	0.14580	1811.77979	0.0
2	1213.09985	444.39990	15.10000	93.87999	0.14590	1831.77979	0.0
2	1213.09985	445.79980	15.09000	93.89000	0.14600	1835.77979	0.0
2	1212.79980	446.29980	15.08000	93.85999	0.14600	1839.77979	0.0
2	1212.50000	446.69995	15.07000	93.84999	0.14610	1843.77979	0.0
2	1212.19995	447.59985	15.08000	93.85999	0.14600	1847.77979	0.0
2	1282.09985	499.29980	14.79000	94.00000	0.14930	2201.78003	0.0
2	1283.50000	501.00000	14.53000	93.95999	0.15190	2205.78052	0.0
2	1282.59985	498.89990	14.46000	93.89000	0.15250	2209.78003	0.0
2	1281.79980	498.89990	14.48000	93.89000	0.15220	2213.77954	0.0
2	1281.19995	497.09985	14.44000	93.87000	0.15260	2217.78027	0.0
2	1281.50000	501.29980	14.43000	93.84999	0.15260	2221.77979	0.0
2	1356.59985	619.69995	14.66000	94.45000	0.15220	2229.80957	1.32348
2	1259.69995	481.69995	14.67000	94.18999	0.15120	2233.78052	0.0
2	1259.09985	481.09985	14.57000	94.09000	0.15190	2237.78003	0.0
2	1260.50000	481.50000	14.42000	94.01999	0.15320	2241.77954	0.0

(HRS)	(M OHM)	(MV)	(WATT)	(HRS)
233 - 1045	16.87999	97.50220	0.14082	440.73438
1045 - 1885	15.15571	93.90846	0.14547	1809.34888
1885 - 2400	14.54499	94.02089	0.15196	2221.38086

Figure 7.7.3-10. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-10. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-11B- 33		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
16	1339.09985	556.59985	16.75999	97.65999	0.14230	24.39999	0.0
16	1337.09985	559.89990	16.45999	97.56999	0.14460	27.88329	0.0
16	1333.79980	561.79980	15.94000	96.42999	0.14590	47.33330	0.0
16	1334.39990	562.09985	15.90000	96.28000	0.14580	51.33330	0.0
16	1334.89990	562.50000	15.82000	96.07999	0.14580	55.33330	0.0
16	1335.79980	562.50000	15.77000	95.81999	0.14550	59.33330	0.0
16	1340.19995	564.09985	15.72000	95.53999	0.14520	63.33330	0.0
16	1342.50000	565.00000	15.67000	95.26999	0.14480	67.33330	0.0
16	1345.00000	565.69995	15.55000	94.93999	0.14500	71.33330	0.0
16	1347.69995	565.69995	15.44000	94.50999	0.14460	75.33330	0.0
16	1350.00000	566.29980	15.38000	94.21999	0.14430	79.33330	0.0
16	1353.29980	567.29980	15.28000	93.78999	0.14390	85.33330	0.0
4	1338.00000	606.69995	15.97000	94.81999	0.14080	412.77979	0.0
4	1338.29980	608.69995	15.88000	94.75999	0.14140	418.19678	0.0
4	1336.59985	608.00000	15.88000	94.62999	0.14100	420.77979	0.0
4	1336.29980	608.69995	15.85000	94.59000	0.14110	424.77979	0.0
4	1336.29980	608.00000	15.82000	94.54999	0.14130	428.77979	0.0
4	1335.79980	607.39990	15.86000	94.50999	0.14080	432.77979	0.0
4	1339.39990	609.00000	15.89000	94.64000	0.14090	436.77979	0.0
4	1339.89990	609.59985	15.83000	94.54999	0.14120	440.77979	0.0
4	1339.39990	607.50000	15.80000	94.39000	0.14090	444.77979	0.0
4	1339.39990	607.79980	15.70000	94.17999	0.14120	448.77979	0.0
4	1341.09985	607.09985	15.74000	94.10999	0.14070	452.77979	0.0
4	1341.89990	606.89990	15.63000	93.87000	0.14090	456.77979	0.0
4	1342.19995	606.50000	15.58000	93.68999	0.14090	458.77979	0.0
4	1253.89990	518.29980	14.63000	87.98999	0.13230	1773.77979	1.13953
4	1249.59985	505.00000	14.50000	87.70999	0.13270	1775.77979	1.10124
4	1249.79980	506.39990	14.40000	87.56999	0.13320	1779.77979	1.10631
4	1249.29980	505.29980	14.35000	87.50000	0.13340	1783.77979	1.10248
4	1247.50000	502.69995	14.30000	87.59000	0.13420	1787.77979	0.0
4	1247.19995	503.50000	14.23000	87.50000	0.13450	1791.77979	1.10065
4	1247.00000	504.79980	14.12000	87.37999	0.13520	1795.77979	1.10548
4	1247.00000	504.59985	14.10000	87.37999	0.13530	1799.77979	1.10449
4	1246.69995	503.89990	14.05000	87.42000	0.13590	1807.77979	1.10219
4	1246.09985	504.29980	13.81000	87.37000	0.13820	1827.77979	1.10560
4	1245.79980	504.29980	13.80000	87.39999	0.13830	1831.77979	1.10552
4	1245.79980	506.69995	13.77000	87.39000	0.13870	1835.77979	1.11406
4	1245.50000	506.29980	13.72000	87.35999	0.13910	1839.77979	1.11280

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
4	1244.89990	505.39990	13.79000	87.45000	0.13870	1843.77979	1.11138
4	1300.79980	607.79980	13.86000	86.93999	0.13640	2197.77930	1.39754
4	1300.79980	610.79980	13.47000	86.84999	0.14000	2201.78003	1.41129
4	1300.29980	610.29980	13.38000	86.73000	0.14050	2205.78052	1.40923
4	1300.00000	608.39990	13.26000	86.73000	0.14180	2209.78003	1.40119
4	1300.00000	608.79980	13.28000	86.67999	0.14150	2213.77954	1.40377
4	1300.00000	610.09985	13.22000	86.60999	0.14180	2217.78027	1.40954
4	1296.00000	598.79980	13.18000	86.78999	0.14280	2225.81006	1.36782
4	1247.79980	511.09985	13.23000	86.14000	0.14020	2229.77979	1.12520
4	1247.79980	510.59985	13.19000	86.06999	0.14040	2233.78052	1.12410
4	1247.50000	509.39990	13.13000	85.98999	0.14080	2237.78003	1.12013

AVERAGE VALUES

9-11B- 33	RESISTANCE		SEEBECK VOLTAGE		POWER		TIME		- NO. OF DATA
TIME RANGE	(M OHM)		(MV)		(WATT)		(HRS)		
0 - 233	15.80749		95.67569		0.14481		58.96799		12
233 - 1045	15.80230		94.40680		0.14101		436.73438		13
1045 - 1885	14.11213		87.50063		0.13569		1805.34888		14
1885 - 2400	13.31999		86.55290		0.14062		2217.38086		10

Figure 7.7.3-11. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-11. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-11B- 34		*** NORMALIZED TO TC=520 TH=1350 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
6	1343.29980	557.29980	16.14999	95.54999	0.14130	24.39999	0.0
6	1346.09985	563.39990	16.20999	95.54999	0.14080	27.88329	0.0
6	1349.69995	564.69995	16.34000	95.46999	0.13950	47.33330	0.0
6	1349.09985	564.69995	16.34000	95.34999	0.13910	51.33330	0.0
6	1349.69995	565.00000	16.37000	95.25999	0.13860	55.33330	0.0
6	1349.39990	565.39990	16.42000	95.20999	0.13800	59.33330	0.0
6	1348.89990	565.39990	16.43999	95.10999	0.13750	63.33330	0.0
6	1349.69995	566.29980	16.48000	95.06999	0.13710	67.33330	0.0
6	1350.50000	567.00000	16.48999	95.00999	0.13680	71.33330	0.0
6	1351.09985	567.00000	16.50999	94.93999	0.13650	75.33330	0.0
6	1351.59985	566.69995	16.54999	94.85999	0.13590	79.33330	0.0
6	1353.00000	567.29980	16.59000	94.78000	0.13540	85.33330	0.0
6	1335.19995	569.79980	16.45999	92.76999	0.13070	432.77979	0.0
6	1335.19995	570.19995	16.45000	92.81000	0.13090	436.77979	0.0
6	1334.59985	568.89990	16.37000	92.62999	0.13110	440.77979	0.0
6	1334.39990	569.00000	16.28000	92.53000	0.13140	444.77979	0.0
6	1335.50000	568.00000	16.28999	92.48000	0.13120	448.77979	0.0
6	1335.50000	568.00000	16.29999	92.46999	0.13110	452.77979	0.0
6	1333.79980	567.39990	16.28000	92.45999	0.13130	454.77979	0.0
6	1287.79980	566.09985	9.01000	80.62999	0.18050	2193.77979	1.25087
6	1292.00000	570.00000	8.74000	80.87000	0.18700	2197.77930	1.25672
6	1290.29980	568.29980	8.43000	80.73999	0.19330	2201.78003	1.25357
6	1289.19995	567.89990	8.34000	80.76999	0.19560	2205.78052	1.25465
6	1289.79980	567.89990	8.29000	80.64000	0.19600	2209.78003	1.25320
6	1290.29980	569.69995	8.31000	80.57999	0.19540	2213.77954	1.25983
6	1289.79980	575.39990	8.76000	80.90999	0.18690	2221.81079	1.28365
6	1226.00000	485.89990	9.21000	80.53999	0.17610	2225.77930	0.0
6	1226.89990	487.19995	8.87000	80.14000	0.18110	2229.77979	0.0
6	1228.00000	485.39990	8.83000	80.10999	0.18170	2233.78052	0.0

AVERAGE VALUES

9-11B- 34						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	16.40749	95.17987	0.13804	58.96799	12	
233 - 1045	16.34714	92.59280	0.13110	444.49390	7	
1885 - 2400	8.67899	80.59290	0.18736	2213.38086	10

Figure 7.7.3-12. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-12. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-11B- 35		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1341.89990	523.39990	16.59000	95.31999	0.13690	24.39999	0.0
8	1345.19995	527.89990	16.56999	95.42999	0.13740	27.88329	0.0
8	1350.50000	533.09985	16.12000	94.56999	0.13870	47.33330	0.0
8	1350.19995	533.09985	16.03000	94.34999	0.13880	51.33330	0.0
8	1351.39990	532.79980	15.95000	94.00000	0.13850	55.33330	0.0
8	1351.89990	534.09985	15.87000	93.82999	0.13870	59.33330	0.0
8	1351.39990	533.09985	15.82000	93.43999	0.13800	63.33330	0.0
8	1352.50000	534.09985	15.75000	93.20999	0.13790	67.33330	0.0
8	1353.89990	534.69995	15.67000	92.87999	0.13760	71.33330	0.0
8	1351.89990	532.39990	15.67000	92.45999	0.13640	75.33330	0.0
8	1352.69995	531.50000	15.66000	92.21999	0.13580	79.33330	0.0
8	1355.00000	532.79980	15.55000	92.00999	0.13610	85.33330	0.0
8	1342.50000	549.89990	15.65000	92.06000	0.13540	380.77979	0.0
8	1343.59985	552.69995	15.59000	92.03999	0.13580	386.19678	0.0
8	1341.59985	552.09985	15.61000	91.96999	0.13550	388.77979	0.0
8	1341.89990	552.79980	15.58000	91.87999	0.13550	392.77979	0.0
8	1342.19995	552.39990	15.58000	91.79999	0.13520	396.77979	0.0
8	1341.29980	551.50000	15.55000	91.68999	0.13520	400.77979	0.0
8	1344.39990	552.89990	15.51000	91.70999	0.13550	404.77979	0.0
8	1346.09985	554.89990	15.52000	91.70000	0.13540	408.77979	0.0
8	1339.89990	550.00000	15.49000	91.56000	0.13530	412.77979	0.0
8	1340.50000	549.29980	15.44000	91.37999	0.13520	416.77979	0.0
8	1345.00000	548.29980	15.37000	91.00999	0.13470	420.77979	0.0
8	1350.19995	548.19995	15.30000	90.42000	0.13360	424.77979	0.0
8	1350.79980	547.79980	15.31000	90.25999	0.13300	426.77979	0.0
8	1268.59985	506.59985	12.02000	85.23999	0.15120	1741.77979	0.0
8	1280.89990	510.69995	11.94000	85.14000	0.15170	1743.77979	0.0
8	1282.09985	519.29980	11.86000	85.14000	0.15280	1747.77979	0.0
8	1282.59985	521.69995	11.78000	85.09999	0.15370	1751.77979	1.10100
8	1281.79980	519.09985	11.88000	85.23000	0.15280	1755.77979	0.0
8	1282.29980	520.29980	11.82000	85.18999	0.15350	1759.77979	0.0
8	1282.29980	522.09985	11.77000	85.18999	0.15410	1763.77979	1.10229
8	1282.09985	521.79980	11.75000	85.20000	0.15450	1767.77979	1.10200
8	1281.50000	520.59985	11.79000	85.25000	0.15410	1775.77979	0.0
8	1282.09985	522.69995	11.69000	85.17999	0.15520	1795.77979	1.10541
8	1281.50000	521.50000	11.74000	85.20999	0.15470	1799.77979	1.10264
8	1282.09985	522.59985	11.68000	85.17000	0.15520	1803.77979	1.10463
8	1282.09985	524.00000	11.66000	85.15999	0.15540	1807.77979	1.10921

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
8	1282.59985	524.89990	11.73000	85.17000	0.15460	1811.77979	1.11143
8	1295.69995	528.59985	12.11000	83.87000	0.14520	2165.78003	1.10167
8	1282.59985	488.19995	11.75000	84.06999	0.15030	2169.77930	0.0
8	1278.89990	484.29980	11.77000	84.03999	0.15010	2173.78003	0.0
8	1277.79980	483.19995	11.75000	84.04999	0.15030	2177.78076	0.0
8	1278.29980	483.50000	11.69000	84.00000	0.15090	2181.78027	0.0
8	1277.19995	484.00000	11.63000	83.92000	0.15140	2185.77979	0.0
8	1077.19995	304.29980	11.88000	83.32999	0.14610	2193.81079	0.78845
8	1304.19995	525.09985	11.83000	84.31000	0.15020	2197.77930	0.0
8	1297.19995	522.50000	11.83000	84.37000	0.15050	2201.78003	0.0

AVERAGE VALUES						
9-11B- 35						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	15.93749	93.64325	0.13757	58.96799	12	
233 - 1045	15.49999	91.49834	0.13502	404.73438	13	
1045 - 1885	11.79356	85.18352	0.15382	1773.34888	14	
1885 - 2400	11.80443	83.99547	0.14944	2183.11450	9

Figure 7.7.3-13. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-13. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 40		*** NORMALIZED TO TC=520 TH=1350 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1348.59985	540.19995	13.89000	93.90999	0.15870	24.39999	0.0
10	1350.79980	542.39990	13.94000	93.84999	0.15790	27.88329	0.0
10	1356.39990	544.39990	14.30000	94.03000	0.15460	47.33330	0.0
10	1357.50000	544.09985	14.34000	93.96999	0.15390	51.33330	0.0
10	1358.00000	544.09985	14.38000	94.03999	0.15380	55.33330	0.0
10	1358.29980	544.39990	14.41000	94.07999	0.15360	59.33330	0.0
10	1361.89990	545.69995	14.43000	94.12000	0.15350	63.33330	0.0
10	1362.69995	546.59985	14.45000	94.17999	0.15350	67.33330	0.0
10	1363.79980	547.29980	14.45000	94.15999	0.15340	71.33330	0.0
10	1364.69995	547.59985	14.47000	94.17000	0.15330	75.33330	0.0
10	1366.00000	547.89990	14.46000	94.17000	0.15330	79.33330	0.0
10	1368.00000	548.59985	14.45000	94.07999	0.15310	85.33330	0.0
10	1356.59985	550.09985	15.02000	92.43999	0.14220	378.77979	0.0
10	1360.79980	554.50000	14.99000	92.65999	0.14320	384.19678	0.0
10	1356.09985	552.79980	14.97000	92.57999	0.14310	386.77979	0.0
10	1355.50000	552.79980	14.95000	92.60999	0.14340	390.77979	0.0
10	1355.50000	552.39990	14.94000	92.64000	0.14360	394.77979	0.0
10	1356.09985	552.09985	14.90000	92.65999	0.14400	398.77979	0.0
10	1358.29980	553.79980	14.90000	92.68999	0.14410	402.77979	0.0
10	1357.69995	555.50000	14.83000	92.73000	0.14500	406.77979	0.0
10	1341.59985	546.59985	14.80000	92.48999	0.14440	410.77979	0.0
10	1341.09985	544.29980	14.83000	92.45000	0.14410	414.77979	0.0
10	1341.59985	543.59985	14.78000	92.45000	0.14460	418.77979	0.0
10	1341.29980	543.19995	14.83000	92.43999	0.14400	422.77979	0.0
10	1343.79980	543.89990	14.79000	92.48000	0.14460	424.77979	0.0
10	1286.59985	525.29980	12.59000	89.56999	0.15940	1739.77979	1.10618
10	1288.59985	526.00000	12.55000	89.60999	0.15990	1741.77979	1.10504
10	1290.29980	531.69995	12.66000	89.75000	0.15910	1745.77979	1.12121
10	1290.89990	533.00000	12.66000	89.82999	0.15940	1749.77979	1.12491
10	1290.59985	532.69995	12.66000	89.87000	0.15950	1753.77979	1.12403
10	1290.89990	533.19995	12.70000	89.90999	0.15910	1757.77979	1.12518
10	1291.79980	534.69995	12.67000	89.95000	0.15970	1761.77979	1.12942
10	1291.50000	534.29980	12.66000	89.98999	0.15990	1765.77979	1.12764
10	1290.89990	533.89990	12.69000	90.00999	0.15970	1773.77979	1.12782
10	1291.19995	534.69995	12.66000	90.10999	0.16030	1793.77979	1.12967
10	1290.89990	534.00000	12.65000	90.12000	0.16050	1797.77979	1.12711
10	1290.89990	534.50000	12.67000	90.14000	0.16030	1801.77979	1.12967
10	1291.19995	535.50000	12.63000	90.14000	0.16080	1805.77979	1.13239

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
10	1291.50000	537.00000	12.65000	90.20000	0.16080	1809.77979	1.13720
10	1331.00000	484.69995	11.56000	88.40999	0.16900	2163.78076	0.0
10	1330.39990	483.69995	11.44000	88.68999	0.17190	2167.78027	0.0
10	1330.19995	483.39990	11.45000	88.78999	0.17220	2171.77979	0.0
10	1329.89990	482.59985	11.53000	88.92999	0.17140	2175.77930	0.0
10	1330.19995	482.39990	11.55000	89.01999	0.17160	2179.77979	0.0
10	1330.19995	483.19995	11.59000	89.14000	0.17140	2183.77930	0.0
10	1412.09985	604.09985	12.18000	90.09000	0.16660	2191.80933	1.16994
10	1337.09985	488.59985	11.84000	89.53000	0.16920	2195.78027	0.0
10	1338.00000	488.79980	11.74000	89.42999	0.17040	2199.77954	0.0
10	1338.79980	489.79980	11.79000	89.48000	0.16980	2203.78027	0.0

AVERAGE VALUES						
9-14A- 40		RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
TIME RANGE	(HRS)					
0 - 233		14.33083	94.06323	0.15438	58.96799	12
233 - 1045		14.88691	92.56302	0.14387	402.73438	13
1045 - 1885		12.64999	89.94276	0.15989	1771.34888	14
1885 - 2400		11.66699	89.15089	0.17035	2183.38086	10

Figure 7.7.3-14. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-14. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 41		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	P. FACTOR
12	1343.59985	587.69995	16.03999	98.01999	0.14380	24.39999	0.0
12	1344.09985	592.19995	15.94000	96.00999	0.14460	27.88329	0.0
12	1350.19995	593.19995	15.83000	95.17000	0.14310	47.33330	0.0
12	1351.59985	592.50000	15.81000	95.04999	0.14290	51.33330	0.0
12	1352.69995	592.50000	15.75000	94.90999	0.14300	55.33330	0.0
12	1353.29980	592.50000	15.75000	94.76999	0.14250	59.33330	0.0
12	1350.50000	596.00000	16.37000	92.78999	0.13150	392.77979	0.0
12	1347.69995	596.09985	16.29999	92.84000	0.13220	404.77979	0.0
12	1348.00000	596.39990	16.25000	92.75000	0.13240	408.77979	0.0
12	1221.59985	441.69995	14.87000	88.18999	0.13070	1751.77979	0.0
12	1294.00000	561.09985	14.93000	88.28000	0.13050	1753.77979	1.21849
12	1221.00000	463.09985	14.55000	88.14000	0.13350	1757.77979	0.0
12	1221.59985	464.59985	14.51000	88.06999	0.13360	1761.77979	0.0
12	1220.39990	462.89990	14.49000	87.96999	0.13350	1765.77979	0.0
12	1220.39990	463.00000	14.48000	87.92000	0.13350	1769.77979	0.0
12	1220.69995	463.50000	14.48000	87.87999	0.13330	1773.77979	0.0
12	1221.00000	464.00000	14.50000	87.79999	0.13290	1777.77979	0.0
12	1220.39990	465.00000	14.46000	87.73000	0.13310	1785.77979	0.0
12	1220.39990	467.39990	14.46000	87.54999	0.13250	1805.77979	0.0
12	1220.19995	467.50000	14.45000	87.51999	0.13250	1809.77979	0.0
12	1220.19995	467.59985	14.44000	87.50999	0.13260	1813.77979	0.0
12	1220.19995	468.39990	14.51000	87.48999	0.13190	1817.77979	0.0
12	1232.09985	469.89990	14.49000	87.90999	0.13330	1821.77979	0.0
12	1287.50000	533.00000	14.49000	87.89000	0.13320	2175.77930	1.12977
12	1297.39990	541.79980	14.22000	87.89000	0.13580	2179.77979	1.14310
12	1298.00000	543.50000	14.16000	87.75999	0.13590	2183.77930	1.14780
12	1298.29980	543.59985	14.18000	87.60999	0.13530	2187.78003	1.14758
12	1298.89990	544.69995	14.17000	87.50999	0.13510	2191.78076	1.15077
12	1316.69995	535.69995	14.80000	87.78999	0.13020	2203.81006	0.0
12	1227.19995	478.79980	13.87000	87.85999	0.13910	2207.77979	0.0
12	1227.19995	478.50000	13.95000	87.78000	0.13810	2211.77930	0.0
12	1228.29980	479.59985	13.88000	87.70000	0.13830	2215.77979	0.0

AVERAGE VALUES

9-14A- 41						
TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA	
0 - 233	15.85333	95.65491	0.14332	44.26941	6	
233 - 1045	16.30666	92.79329	0.13203	402.11304	3	
1045 - 1885	14.54428	87.85417	0.13267	1783.34888	14	
1885 - 2400	14.19110	87.75430	0.13569	2195.33667	9

Figure 7.7.3-15. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.3-15. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

9-14A- 42		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1341.29980	561.50000	16.56000	97.56999	0.14370	24.39999	0.0
14	1341.29980	565.69995	16.57999	97.64000	0.14370	27.88329	0.0
14	1341.89990	567.89990	16.71999	97.60999	0.14250	47.33330	0.0
14	1342.19995	567.59985	16.71999	97.56999	0.14240	51.33330	0.0
14	1342.69995	567.89990	16.78000	97.48999	0.14160	55.33330	0.0
14	1342.69995	568.29980	16.81999	97.45999	0.14120	59.33330	0.0
14	1345.79980	569.59985	16.82999	97.40999	0.14090	63.33330	0.0
14	1347.19995	570.19995	16.85999	97.29999	0.14040	67.33330	0.0
14	1348.29980	570.89990	16.87999	97.21999	0.14000	71.33330	0.0
14	1349.69995	571.19995	16.87999	97.09000	0.13960	75.33330	0.0
14	1353.00000	571.79980	16.85999	96.85999	0.13910	79.33330	0.0
14	1355.19995	572.50000	16.87999	96.65999	0.13840	85.33330	0.0
14	1359.39990	614.69995	16.79999	96.17000	0.13760	416.77979	0.0
14	1362.39990	619.50000	16.87000	96.34999	0.13760	422.19678	0.0
14	1357.69995	617.69995	16.90999	96.23999	0.13700	424.77979	0.0
14	1357.50000	618.39990	16.79999	96.17000	0.13760	428.77979	0.0
14	1357.50000	618.09985	16.81999	96.10999	0.13730	432.77979	0.0
14	1358.00000	617.39990	16.84000	96.07999	0.13710	436.77979	0.0
14	1360.19995	618.50000	16.92999	96.42000	0.13730	440.77979	0.0
14	1360.00000	620.79980	16.89000	96.53999	0.13790	444.77979	0.0
14	1341.09985	608.19995	16.89000	96.25000	0.13710	448.77979	0.0
14	1340.19995	605.89990	16.73000	96.03000	0.13780	452.77979	0.0
14	1340.50000	605.09985	16.70000	95.90999	0.13780	456.77979	0.0
14	1339.89990	604.79980	16.67000	95.81999	0.13770	460.77979	0.0
14	1346.09985	607.50000	16.81999	96.06000	0.13710	462.77979	0.0
14	1236.79980	502.00000	14.51000	90.31000	0.14050	1777.77979	1.11420
14	1224.19995	483.39990	14.44000	90.51999	0.14180	1779.77979	0.0
14	1224.00000	479.79980	14.33000	90.54999	0.14310	1783.77979	0.0
14	1228.59985	483.19995	14.25000	90.42000	0.14340	1787.77979	0.0
14	1226.89990	480.89990	14.24000	90.45000	0.14360	1791.77979	0.0
14	1226.89990	480.89990	14.22000	90.40999	0.14370	1795.77979	0.0
14	1228.00000	482.39990	14.14000	90.32999	0.14420	1799.77979	0.0
14	1227.79980	482.59985	14.15000	90.26999	0.14400	1803.77979	0.0
14	1227.19995	483.00000	14.18000	90.28000	0.14370	1811.77979	0.0
14	1226.89990	484.00000	14.01000	90.09000	0.14480	1831.77979	0.0
14	1226.00000	483.39990	13.99000	90.10999	0.14510	1835.77979	0.0
14	1226.29980	483.69995	14.01000	90.07999	0.14480	1839.77979	0.0
14	1226.29980	484.50000	13.97000	90.09000	0.14530	1843.77979	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
14	1226.59985	484.59985	14.04000	90.20999	0.14490	1847.77979	0.0
14	1286.09985	602.09985	14.69000	88.95999	0.13470	2201.78003	1.40900
14	1282.09985	591.89990	14.61000	90.01999	0.13860	2205.78052	1.37092
14	1281.79980	592.29980	14.30000	89.81000	0.14100	2209.78003	1.37427
14	1281.50000	588.50000	14.22000	89.75000	0.14160	2213.77954	1.35762
14	1282.29980	589.50000	14.13000	89.73000	0.14240	2217.78027	1.36008
14	1282.09985	590.19995	14.11000	89.67999	0.14250	2221.77979	1.36494
14	1280.59985	591.69995	14.47000	90.09000	0.14020	2229.80957	1.37451
14	1280.89990	588.29980	14.33000	90.07999	0.14160	2233.78052	1.35893
14	1281.79980	591.00000	14.23000	90.00000	0.14230	2237.78003	1.36827
14	1280.29980	588.69995	14.09000	89.87000	0.14330	2241.77954	1.36087

AVERAGE VALUES						
9-14A- 42	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME		
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)	NO. OF DATA	
(HRS)						
0 - 233	16.78082	97.32324	0.14112	58.96799	12	
233 - 1045	16.82076	96.16525	0.13745	440.73438	13	
1045 - 1885	14.17714	90.29416	0.14378	1809.34888	14	
1885 - 2400	14.31799	89.79892	0.14082	2221.38086	10	

7.7.4 PERFORMANCE TEST DATA

LOT 9 - N-TYPE

$T_H = 1090^{\circ}\text{F}$

$T_C = 520^{\circ}\text{F}$

Control Sample: Batch 20B, Sample 40

Total Time (Hr): 2695

Figure 7.7.4-1. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

9 - 20 B - 40

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

3-208- 40		*** NORMALIZED TO TC=520 TH=109C ***					
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	P. FACTOR
18	1076.39990	514.69995	13.10000	67.87000	0.08790	0.0	0.0
18	1122.00000	543.00000	13.02000	67.70999	0.08810	38.54999	0.0
18	1071.89990	498.89990	13.10000	66.71999	0.08500	41.38329	0.0
18	1079.29980	512.59985	13.08000	67.12000	0.08610	42.54999	0.0
18	1078.79980	532.39990	13.66000	68.17000	0.08510	56.36670	0.0
18	1073.50000	505.89990	13.46000	67.45000	0.08450	58.95000	0.0
18	1073.50000	504.89990	13.44000	67.43999	0.08460	62.84999	0.0
18	1074.09985	504.59985	13.43000	67.45000	0.08470	66.96669	0.0
18	1074.59985	504.39990	13.41000	67.46999	0.08490	70.98329	0.0
18	1074.69995	504.39990	13.40000	67.48999	0.08490	74.98329	0.0
18	1074.69995	504.29980	13.40000	67.50000	0.08500	78.96669	0.0
18	1078.89990	505.59985	13.35000	67.56999	0.08550	194.58299	0.0
18	1079.00000	504.59985	13.33000	67.53999	0.08550	198.56699	0.0
18	1079.09985	505.00000	13.33000	67.56999	0.08570	202.56699	0.0
18	1080.50000	510.89990	13.31000	67.75000	0.08620	207.41699	0.0
18	1082.69995	510.69995	13.25000	67.45999	0.08590	210.73299	0.0
18	1083.00000	510.50000	13.10000	67.45000	0.08680	214.54999	0.0
18	1052.79980	508.89990	13.09000	67.42000	0.08680	218.54999	0.0
18	1082.89990	509.79980	13.07000	67.45000	0.08700	222.54999	0.0
18	1083.39990	510.59985	13.07000	67.48000	0.08710	228.54999	0.0
18	1083.39990	510.59985	13.07000	67.48000	0.08710	228.54999	0.0
18	1084.39990	508.00000	13.08000	67.42000	0.08690	236.54999	0.0
18	1084.79980	509.50000	13.07000	67.46999	0.08710	246.54999	0.0
18	1082.69995	515.29980	13.06000	67.67000	0.08770	254.54999	0.0
18	1080.50000	514.39990	13.07000	67.73999	0.08780	258.54980	0.0
18	1080.79980	514.39990	13.07000	67.73000	0.08770	262.54980	0.0
18	1080.79980	514.39990	13.07000	67.73000	0.08780	266.54980	0.0
18	1080.50000	514.09985	13.06000	67.70999	0.08770	270.54980	0.0
18	1080.79980	514.09985	13.04000	67.68999	0.08780	274.54980	0.0
18	1081.09985	514.09985	13.07000	67.67999	0.08760	278.54980	0.0
18	1081.09985	514.09985	13.03000	67.70000	0.08790	282.54980	0.0
18	1080.79980	513.69995	13.03000	67.68999	0.08790	286.54980	0.0
18	1080.79980	513.69995	13.02000	67.70999	0.08800	290.54980	0.0
18	1081.09985	514.09985	13.01000	67.75000	0.08820	294.54980	0.0
18	1080.79980	514.09985	13.01000	67.73000	0.08810	308.54980	0.0
18	1103.79980	522.39990	13.01000	67.84000	0.08850	312.54980	0.0
18	1103.79980	522.79980	12.99000	67.87999	0.08870	316.54980	0.0
18	1103.79980	522.79980	12.98000	67.89000	0.08880	320.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

7-114	9-208- 40		*** NORMALIZED TO TC=520 TH=109C ***			TIME	P. FACTOR
	FIX. HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER		
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
18	1093.09985	518.89990	12.98000	67.81999	0.08860	324.54980	0.0
18	1083.50000	515.29980	12.98000	67.79999	0.08850	328.54980	0.0
18	1083.19995	516.59985	12.92000	67.82999	0.08900	332.54980	0.0
18	1083.19995	516.59985	12.97000	67.82999	0.08870	336.54980	0.0
18	1083.19995	516.00000	12.96000	67.81000	0.08870	340.54980	0.0
18	1083.50000	516.59985	12.95000	67.81999	0.08880	344.54980	0.0
18	1083.19995	517.00000	12.95000	67.85999	0.08890	348.54980	0.0
18	1083.19995	516.59985	12.95000	67.81999	0.08880	352.54980	0.0
18	1053.59985	505.00000	13.85000	57.10999	0.08130	403.61694	0.0
18	1050.79980	511.79980	13.70000	67.45000	0.08300	407.09985	0.0
18	1036.19995	507.00000	14.06000	67.23000	0.08130	434.54980	0.0
18	1031.29980	506.59985	14.07000	67.67000	0.08140	438.54980	0.0
18	1031.29980	506.59985	14.07000	67.70999	0.08150	442.54980	0.0
18	1034.09985	507.89990	14.02000	67.73000	0.08180	446.54980	0.0
18	1037.79980	508.89990	13.93000	67.73999	0.08230	450.54980	0.0
18	1041.19995	507.89990	13.80000	67.70999	0.08300	454.54980	0.0
18	1046.50000	508.89990	13.74000	67.73999	0.08350	458.54980	0.0
18	1055.50000	509.50000	13.70000	67.71999	0.08370	464.54980	0.0
18	1121.39990	527.00000	13.33000	67.75000	0.08610	477.76685	0.0
18	1121.69995	527.00000	13.31000	67.76999	0.08630	480.54980	0.0
18	1121.69995	527.00000	13.29000	67.81000	0.08650	484.54980	0.0
18	1121.69995	526.59985	13.21000	67.78999	0.08700	488.54980	0.0
18	1122.00000	527.29980	13.22000	67.81999	0.08700	490.54980	0.0
18	1078.00000	506.29980	13.25000	67.50999	0.08600	497.14990	0.0
18	1091.50000	537.59985	13.17000	68.35999	0.08870	500.54980	0.0
18	1091.79980	537.29980	13.21000	68.31999	0.08840	504.54980	0.0
18	1091.50000	536.59985	13.15000	68.31000	0.08870	508.54980	0.0
18	1092.09985	536.29980	13.18000	68.29999	0.08850	512.54980	0.0
18	1091.50000	535.69995	13.12000	68.28999	0.08880	513.84985	0.0
18	1091.19995	535.09985	13.19000	68.26999	0.08830	530.54980	0.0
18	1090.89990	533.29980	13.16000	68.17999	0.08830	534.54980	0.0
18	1091.50000	534.19995	12.95000	68.23999	0.08990	538.54980	0.0
18	1085.39990	511.39990	13.08000	67.56000	0.08730	542.54980	0.0
18	1085.59985	511.79980	13.08000	67.54999	0.08720	546.54980	0.0
18	1085.50000	511.00000	13.08000	67.53000	0.08720	550.54980	0.0
18	1085.29980	509.79980	13.05000	67.50999	0.08730	554.54980	0.0
18	1085.50000	510.29980	13.11000	67.50999	0.08690	558.54980	0.0
18	1086.00000	510.29980	13.11000	67.50999	0.08690	562.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
18	1086.50000	510.79980	13.10000	67.53000	0.08700	566.54980	0.0
18	1087.39990	511.50000	13.09000	67.53999	0.08710	570.54980	0.0
18	1087.50000	511.29980	13.07000	67.53000	0.08730	574.54980	0.0
18	1087.89990	511.09985	13.05000	67.53000	0.08740	578.54980	0.0
18	1088.19995	511.00000	13.07000	67.51999	0.08720	582.54980	0.0
18	1088.00000	510.69995	12.98000	67.50999	0.08780	586.54980	0.0
18	1088.29980	510.89990	13.08000	67.51999	0.08720	590.54980	0.0
18	1088.69995	510.50000	13.04000	67.51999	0.08740	598.54980	0.0
18	1089.69995	510.79980	13.01000	67.53000	0.08760	657.91699	0.0
18	1084.69995	513.00000	13.25000	67.68999	0.08650	662.54980	0.0
18	1086.50000	515.19995	13.23000	67.73999	0.08670	666.54980	0.0
18	1085.79980	514.69995	13.22000	67.73999	0.08680	670.54980	0.0
18	1086.69995	518.09985	13.22000	67.84000	0.08710	674.54980	0.0
18	1086.59985	517.69995	13.22000	67.82999	0.08700	678.54980	0.0
18	1089.09985	518.39990	13.21000	67.82999	0.08710	682.61694	0.0
18	1086.69995	519.59985	13.21000	67.89000	0.08720	686.83276	0.0
18	1080.69995	516.19995	13.21000	67.82999	0.08700	690.54980	0.0
18	1088.39990	510.69995	12.95000	67.51999	0.08800	694.54980	0.0
18	1081.00000	515.59985	13.21000	67.81999	0.08700	695.88281	0.0
18	1087.39990	517.69995	13.19000	67.81000	0.08720	714.54980	0.0
18	1086.89990	517.29980	13.20000	67.81999	0.08710	718.54980	0.0
18	1086.89990	516.79980	13.19000	67.81000	0.08710	722.54980	0.0
18	1086.89990	516.29980	13.20000	67.79999	0.08710	726.54980	0.0
18	1083.69995	515.69995	13.19000	67.78999	0.08710	730.54980	0.0
18	1082.29980	515.29980	13.19000	67.78999	0.08710	734.54980	0.0
18	1082.19995	516.00000	13.18000	67.81999	0.08720	738.54980	0.0
18	1081.79980	515.29980	13.17000	67.81000	0.08730	742.54980	0.0
18	1081.69995	514.69995	13.15000	67.78999	0.08740	746.54980	0.0
18	1081.50000	514.29980	13.18000	67.78999	0.08720	750.54980	0.0
18	1081.69995	514.39990	13.17000	67.76999	0.08720	753.81689	0.0
18	1089.59985	515.19995	13.17000	67.79999	0.08720	760.54980	0.0
18	1081.39990	515.19995	13.17000	67.81000	0.08730	762.54980	0.0
18	1081.50000	514.89990	13.15000	67.81000	0.08740	766.54980	0.0
18	1081.50000	514.89990	13.15000	67.81000	0.08740	766.54980	0.0
18	1081.29980	514.50000	13.17000	67.81000	0.08730	774.54980	0.0
18	1081.50000	514.50000	13.19000	67.79999	0.08710	778.54980	0.0
18	1081.19995	514.09985	13.16000	67.79999	0.08730	782.54980	0.0
18	1081.00000	514.09985	13.15000	67.78999	0.08740	786.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

7-116	9-20B- 40		*** NORMALIZED TO TC=520 TH=1090 ***				TIME (HRS)	P. FACTOR
	FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
	18	1081.09985	514.09985	13.17000	67.81000	0.08730	790.54980	0.0
	18	1081.39990	513.89990	13.16000	67.75999	0.08730	794.54980	0.0
	18	1081.09985	513.79980	13.05000	68.10999	0.08880	798.54980	0.0
	18	1081.69995	514.00000	13.16000	67.81000	0.08730	802.54980	0.0
	18	1082.50000	515.09985	13.15000	67.82999	0.08750	806.54980	0.0
	18	1082.89990	515.89990	13.16000	67.84000	0.08740	810.13281	0.0
	18	1086.59985	516.29980	13.16000	67.90999	0.08760	842.54980	0.0
	18	1086.89990	516.00000	13.14000	67.89000	0.08770	846.54980	0.0
	18	1088.89990	517.19995	13.13000	67.87000	0.08770	850.54980	0.0
	18	1087.59985	517.59985	13.10000	67.87000	0.08790	854.54980	0.0
	18	1085.29980	516.09985	13.12000	67.84000	0.08770	858.54980	0.0
	18	1085.09985	514.79980	13.09000	67.79999	0.08780	862.54980	0.0
	18	1083.79980	513.09985	13.09000	67.73999	0.08760	866.54980	0.0
	18	1083.39990	512.69995	13.10000	67.73999	0.08760	870.54980	0.0
	18	1083.19995	512.59985	13.12000	67.73000	0.08740	872.54980	0.0
	18	1092.39990	516.50000	13.09000	67.81999	0.08790	1022.54980	0.0
	18	1087.59985	516.00000	13.08000	67.79999	0.08790	1026.94995	0.0
	18	1084.00000	513.59985	13.07000	67.75999	0.08780	1030.54980	0.0
	18	1083.29980	513.09985	13.10000	67.75000	0.08760	1034.54980	0.0
	18	1082.89990	513.00000	13.08000	67.75000	0.08770	1038.54980	0.0
	18	1082.69995	513.09985	13.08000	67.76999	0.08770	1042.54980	0.0
	18	1083.09985	513.89990	13.07000	67.78000	0.08790	1046.54980	0.0
	18	1083.29980	514.09985	13.07000	67.78000	0.08780	1050.54980	0.0
	18	1082.29980	512.79980	13.09000	67.75000	0.08770	1054.54980	0.0
	18	1081.79980	511.89990	13.06000	67.73000	0.08780	1058.54980	0.0
	18	1081.69995	511.89990	13.08000	67.73000	0.08770	1062.54980	0.0
	18	1081.29980	511.89990	13.06000	67.73999	0.08780	1066.54980	0.0
	18	1081.69995	511.69995	13.07000	67.73000	0.08770	1070.54980	0.0
	18	1081.29980	511.09985	13.08000	67.70000	0.08760	1071.54980	0.0
	18	1081.69995	512.19995	13.07000	67.71999	0.08780	1073.54980	0.0
	18	1080.79980	511.79980	13.08000	67.73000	0.08770	1110.83325	0.0
	18	1081.39990	512.39990	13.08000	67.73999	0.08770	1113.54980	0.0
	18	1081.79980	512.69995	13.06000	67.75000	0.08780	1115.54980	0.0
	18	1081.39990	512.69995	13.06000	67.75000	0.08790	1117.54980	0.0
	18	1079.50000	510.79980	13.06000	67.67999	0.08760	1126.54980	0.0
	18	1079.69995	511.29980	13.08000	67.68999	0.08760	1130.54980	0.0
	18	1079.50000	510.79980	13.07000	67.67999	0.08760	1134.54980	0.0
	18	1079.09985	510.59985	13.07000	67.67999	0.08760	1138.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
18	1079.59985	510.89990	13.07000	67.67999	0.08760	1142.54980	0.0
18	1079.69995	511.09985	13.05000	67.68999	0.08770	1146.54980	0.0
18	1079.39990	510.79980	13.05000	67.67999	0.08780	1150.54980	0.0
18	1079.00000	510.50000	13.06000	67.67999	0.08770	1158.54980	0.0
18	1078.69995	510.29980	13.07000	67.67000	0.08760	1161.69995	0.0
18	1080.39990	510.50000	13.04000	67.64000	0.08770	1166.54980	0.0
18	1081.29980	512.09985	13.03000	67.70999	0.08790	1170.54980	0.0
18	1081.09985	514.09985	13.06000	67.78000	0.08790	1174.54980	0.0
18	1081.39990	517.69995	13.05000	67.89000	0.08830	1178.54980	0.0
18	1081.39990	517.89990	13.03000	67.89000	0.08840	1182.54980	0.0
18	1081.39990	518.00000	13.05000	67.89999	0.08830	1186.07983	0.0
18	1079.59985	516.00000	13.03000	67.85999	0.08840	1190.54980	0.0
18	1082.09985	519.09985	13.05000	67.92999	0.08840	1194.54980	0.0
18	1080.69995	517.69995	13.05000	67.89999	0.08830	1198.54980	0.0
18	1081.29980	518.19995	13.05000	67.89999	0.08830	1202.64990	0.0
18	1081.39990	518.19995	13.05000	67.89999	0.08830	1206.54980	0.0
18	1081.50000	518.39990	13.05000	67.92000	0.08840	1210.54980	0.0
18	1081.59985	518.69995	13.05000	67.92999	0.08840	1214.87988	0.0
18	1080.09985	516.19995	13.05000	67.85999	0.08820	1215.54980	0.0
18	1081.79980	519.09985	13.04000	67.92999	0.08840	1222.54980	0.0
18	1081.09985	518.09985	13.06000	67.90999	0.08830	1226.54980	0.0
18	1080.69995	517.89990	13.05000	67.89999	0.08830	1230.54980	0.0
18	1080.69995	517.79980	13.05000	67.89999	0.08830	1234.54980	0.0
18	1080.69995	517.39990	13.05000	67.89000	0.08830	1241.00000	0.0
18	1080.79980	518.00000	13.05000	67.89999	0.08830	1246.54980	0.0
18	1081.00000	518.19995	13.05000	67.90999	0.08840	1250.54980	0.0
18	1080.69995	518.00000	13.04000	67.89999	0.08840	1254.54980	0.0
18	1080.39990	517.79980	13.04000	67.89000	0.08840	1258.54980	0.0
18	1080.59985	518.00000	13.04000	67.89999	0.08840	1262.54980	0.0
18	1080.39990	517.69995	13.04000	67.89000	0.08840	1266.54980	0.0
18	1080.89990	521.39990	13.06000	67.98999	0.08850	1271.54980	0.0
18	1078.79980	516.29980	13.05000	67.81999	0.08810	1282.12988	0.0
18	1080.09985	518.09985	13.04000	67.90999	0.08840	1287.12988	0.0
18	1079.00000	518.00000	13.06000	67.90999	0.08830	1290.54980	0.0
18	1078.50000	517.69995	13.05000	67.89999	0.08830	1294.54980	0.0
18	1079.69995	517.39990	13.04000	67.87999	0.08830	1298.54980	0.0
18	1079.89990	517.79980	13.04000	67.89000	0.08840	1302.54980	0.0
18	1079.69995	517.79980	13.03000	67.89999	0.08850	1306.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

7-118	9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***			TIME	P. FACTOR
	FIX. HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER		
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
18	1079.59985	517.89990	13.05000	67.89999	0.08840	1310.54980	0.0
18	1080.39990	518.59985	13.03000	67.89000	0.08840	1314.29980	0.0
18	1079.59985	516.29980	13.03000	67.82999	0.08830	1318.54980	0.0
18	1079.39990	516.79980	13.04000	67.84000	0.08820	1326.54980	0.0
18	1079.19995	516.89990	13.05000	67.85999	0.08820	1330.54980	0.0
18	1078.50000	516.39990	13.03000	67.85999	0.08830	1334.54980	0.0
18	1079.29980	517.50000	13.06000	67.87999	0.08820	1338.54980	0.0
18	1077.39990	517.00000	13.04000	67.89000	0.08830	1358.54980	0.0
18	1078.00000	517.89990	13.08000	67.95000	0.08830	1362.54980	0.0
18	1077.39990	517.00000	13.08000	67.92000	0.08820	1366.54980	0.0
18	1077.69995	517.59985	13.08000	67.95000	0.08830	1370.54980	0.0
18	1077.69995	517.59985	13.08000	67.93999	0.08820	1374.54980	0.0
18	1077.39990	517.59985	13.08000	67.93999	0.08820	1378.54980	0.0
18	1080.89990	519.00000	13.04000	67.92000	0.08850	1382.54980	0.0
18	1079.79980	518.29980	13.05000	67.90999	0.08840	1390.54980	0.0
18	1079.19995	518.00000	13.03000	67.90999	0.08850	1394.54980	0.0
18	1078.59985	517.79980	13.05000	67.90999	0.08840	1398.54980	0.0
18	1078.59985	518.00000	13.04000	67.89999	0.08840	1402.54980	0.0
18	1078.59985	517.79980	13.04000	67.89999	0.08840	1406.54980	0.0
18	1078.39990	518.09985	13.06000	67.90999	0.08830	1411.86987	0.0
18	1078.79980	518.09985	13.05000	67.90999	0.08830	1414.54980	0.0
18	1079.19995	518.29980	13.07000	67.92000	0.08820	1418.54980	0.0
18	1078.79980	518.09985	13.04000	67.90999	0.08840	1422.54980	0.0
18	1078.29980	517.89990	13.04000	67.90999	0.08840	1426.54980	0.0
18	1078.79980	518.19995	13.04000	67.90999	0.08840	1428.54980	0.0
18	1079.50000	519.00000	13.04000	67.90999	0.08840	1450.54980	0.0
18	1079.79980	518.69995	13.04000	67.89000	0.08840	1458.54980	0.0
18	1078.89990	518.19995	13.03000	67.89000	0.08840	1462.54980	0.0
18	1078.89990	517.89990	13.04000	67.87000	0.08830	1466.54980	0.0
18	1078.00000	517.19995	13.04000	67.84999	0.08830	1470.54980	0.0
18	1079.29980	518.00000	13.07000	67.87000	0.08810	1474.54980	0.0
18	1079.69995	518.50000	13.04000	67.89000	0.08840	1478.54980	0.0
18	1079.69995	518.69995	13.04000	67.89999	0.08840	1482.54980	0.0
18	1078.59985	517.79980	13.08000	67.87000	0.08810	1486.54980	0.0
18	1078.69995	517.59985	13.04000	67.87000	0.08830	1490.54980	0.0
18	1077.59985	516.89990	13.03000	67.84999	0.08830	1494.54980	0.0
18	1078.79980	517.59985	13.05000	67.87000	0.08830	1498.54980	0.0
18	1079.29980	518.19995	13.05000	67.87999	0.08830	1500.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

9-20B- 40		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(OHM)	(MV)	(WATT)	(HRS)	
18	1078.09985	518.00000	13.03000	67.87999	0.08840	1507.61987	0.0
18	1076.39990	516.09985	13.04000	67.82999	0.08820	1521.92993	0.0
18	1075.89990	515.79980	13.03000	67.82999	0.08830	1526.54980	0.0
18	1076.79980	517.69995	12.94000	67.85999	0.08900	1531.64990	0.0
18	1076.79980	517.00000	12.93000	67.82999	0.08900	1534.54980	0.0
18	1076.50000	516.39990	12.92000	67.81000	0.08900	1538.54980	0.0
18	1076.50000	516.69995	12.95000	67.82999	0.08880	1542.54980	0.0
18	1076.00000	516.29980	12.92000	67.81999	0.08900	1546.54980	0.0
18	1076.00000	516.69995	12.95000	67.82999	0.08880	1550.54980	0.0
18	1076.00000	516.69995	13.05000	67.87000	0.08820	1554.54980	0.0
18	1076.19995	517.00000	13.03000	67.85999	0.08840	1558.54980	0.0
18	1076.00000	516.29980	13.02000	67.84000	0.08840	1562.54980	0.0
18	1075.29980	515.59985	13.02000	67.82999	0.08830	1566.54980	0.0
18	1075.50000	515.69995	13.05000	67.84000	0.08820	1570.54980	0.0
18	1075.19995	515.29980	13.04000	67.81999	0.08820	1574.54980	0.0
18	1075.50000	515.59985	13.04000	67.82999	0.08820	1578.54980	0.0
18	1074.79980	515.39990	13.04000	67.82999	0.08820	1582.54980	0.0
18	1075.29980	515.50000	13.04000	67.82999	0.08820	1586.54980	0.0
18	1075.29980	515.50000	13.05000	67.82999	0.08820	1590.54980	0.0
18	1075.00000	515.29980	13.04000	67.82999	0.08820	1594.54980	0.0
18	1075.09985	515.50000	13.04000	67.82999	0.08820	1598.54980	0.0
18	1075.19995	515.50000	13.04000	67.82999	0.08820	1602.54980	0.0
18	1074.69995	515.00000	13.03000	67.81000	0.08820	1606.54980	0.0
18	1074.79980	515.00000	13.04000	67.81000	0.08820	1622.54980	0.0
18	1075.00000	515.69995	13.04000	67.84000	0.08820	1626.54980	0.0
18	1075.59985	516.29980	13.05000	67.84000	0.08820	1630.54980	0.0
18	1074.89990	515.00000	13.04000	67.81000	0.08820	1634.54980	0.0
18	1074.79980	514.89990	13.04000	67.81000	0.08810	1638.54980	0.0
18	1074.69995	515.29980	13.04000	67.81999	0.08820	1642.54980	0.0
18	1075.59985	516.39990	13.04000	67.84999	0.08830	1646.54980	0.0
18	1075.39990	514.89990	13.05000	67.79999	0.08810	1651.31982	0.0
18	1075.59985	516.29980	13.05000	67.84000	0.08820	1654.54980	0.0
18	1075.59985	516.09985	13.04000	67.84000	0.08820	1658.54980	0.0
18	1075.50000	516.00000	13.05000	67.84000	0.08820	1662.54980	0.0
18	1075.00000	515.39990	13.04000	67.81999	0.08820	1666.54980	0.0
18	1075.09985	515.59985	13.04000	67.82999	0.08820	1670.54980	0.0
18	1075.09985	515.79980	13.05000	67.82999	0.08820	1674.54980	0.0
18	1075.89990	516.39990	13.04000	67.84000	0.08830	1678.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

7-120 FIX.	9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***				TIME (HRS)	P. FACTOR
	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)			
18	1074.69995	514.59985	13.04000	67.81000	0.08810	1682.54980	0.0	
18	1074.39990	514.29980	13.04000	67.78999	0.08810	1686.54980	0.0	
18	1075.29980	516.00000	13.04000	67.84000	0.08820	1690.62988	0.0	
18	1075.39990	516.29980	13.04000	67.84000	0.08830	1694.54980	0.0	
18	1075.79980	517.00000	13.04000	67.85999	0.08830	1698.54980	0.0	
18	1075.89990	517.00000	13.04000	67.85999	0.08830	1700.54980	0.0	
18	1075.29980	516.39990	13.04000	67.84999	0.08830	1703.67993	0.0	
18	1076.39990	517.50000	13.05000	67.89000	0.08830	1720.54980	0.0	
18	1076.59985	518.00000	13.04000	67.90999	0.08840	1722.54980	0.0	
18	1076.09985	517.39990	13.04000	67.87999	0.08840	1726.54980	0.0	
18	1074.89990	516.00000	13.05000	67.85999	0.08830	1730.54980	0.0	
18	1074.29980	515.29980	13.04000	67.84000	0.08820	1734.54980	0.0	
18	1074.50000	515.19995	13.04000	67.89999	0.08840	1742.54980	0.0	
18	1076.09985	517.00000	13.04000	67.89000	0.08840	1746.54980	0.0	
18	1075.59985	516.59985	13.04000	67.89000	0.08840	1750.54980	0.0	
18	1075.79980	517.19995	13.04000	67.89000	0.08840	1754.54980	0.0	
18	1074.69995	516.00000	13.04000	67.89000	0.08840	1758.54980	0.0	
18	1075.09985	516.79980	13.04000	67.89000	0.08840	1762.54980	0.0	
18	1074.79980	516.29980	13.04000	67.89999	0.08840	1766.54980	0.0	
18	1075.29980	516.50000	13.04000	67.89000	0.08840	1770.54980	0.0	
18	1075.09985	516.19995	13.04000	67.89000	0.08840	1774.54980	0.0	
18	1075.89990	517.29980	13.03000	67.89000	0.08840	1778.54980	0.0	
18	1075.79980	517.29980	13.04000	67.87999	0.08840	1782.54980	0.0	
18	1075.79980	517.50000	13.04000	67.89000	0.08840	1786.54980	0.0	
18	1075.19995	516.69995	13.06000	67.89000	0.08820	1798.54980	0.0	
18	1075.00000	516.89990	13.03000	67.89000	0.08840	1802.54980	0.0	
18	1074.89990	516.69995	13.04000	67.89000	0.08840	1806.54980	0.0	
18	1075.00000	517.29980	13.03000	67.89000	0.08840	1810.54980	0.0	
18	1075.19995	517.69995	13.05000	67.89000	0.08830	1814.54980	0.0	
18	1086.69995	519.29980	13.02000	67.87999	0.08850	1818.54980	0.0	
18	1105.59985	526.09985	13.05000	67.85999	0.08830	1822.54980	0.0	
18	1105.00000	525.89990	13.04000	67.89999	0.08840	1826.54980	0.0	
18	1104.69995	525.59985	13.05000	67.89999	0.08830	1830.54980	0.0	
18	1105.00000	526.09985	13.03000	67.85999	0.08830	1834.54980	0.0	
18	1072.79980	510.29980	13.02000	67.87999	0.08850	1838.54980	0.0	
18	1076.39990	514.19995	13.05000	67.85999	0.08820	1842.54980	0.0	
18	1084.59985	518.29980	13.06000	67.87999	0.08820	1866.54980	0.0	
18	1082.89990	515.79980	13.05000	67.89000	0.08830	1882.54980	0.0	

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
18	1076.19995	515.09985	13.04000	67.89000	0.08830	1886.54980	0.0
18	1069.69995	508.39990	13.08000	67.89000	0.08810	1898.54980	0.0
18	1075.59985	514.29980	13.07000	67.89000	0.08820	1902.54980	0.0
18	1075.09985	514.50000	13.08000	67.89000	0.08810	1906.54980	0.0
18	1075.00000	514.39990	13.07000	67.87999	0.08810	1910.54980	0.0
18	1074.79980	514.39990	13.08000	67.85999	0.08800	1914.54980	0.0
18	1074.29980	514.29980	13.09000	67.87999	0.08800	1918.54980	0.0
18	1074.19995	514.19995	13.09000	67.87999	0.08800	1922.54980	0.0
18	1074.29980	514.29980	13.08000	67.87999	0.08810	1926.54980	0.0
18	1073.59985	513.89990	13.09000	67.89000	0.08810	1930.54980	0.0
18	1073.69995	514.09985	13.08000	67.87999	0.08810	1934.54980	0.0
18	1073.59985	514.00000	13.08000	67.89000	0.08810	1938.54980	0.0
18	1072.69995	513.29980	13.07000	67.89000	0.08810	1942.54980	0.0
18	1074.00000	514.00000	13.08000	67.89000	0.08810	1946.54980	0.0
18	1074.00000	514.09985	13.06000	67.87999	0.08820	1950.54980	0.0
18	1073.09985	513.39990	13.08000	67.89000	0.08810	1954.54980	0.0
18	1073.50000	513.69995	13.07000	67.89000	0.08810	1958.54980	0.0
18	1077.19995	514.39990	13.08000	67.89000	0.08810	1962.54980	0.0
18	1078.79980	515.09985	13.09000	67.87999	0.08800	1966.54980	0.0
18	1078.69995	515.00000	13.08000	67.89000	0.08810	1970.54980	0.0
18	1078.89990	515.09985	13.10000	67.87999	0.08790	1974.54980	0.0
18	1078.59985	514.79980	13.07000	67.87999	0.08820	1978.54980	0.0
18	1079.09985	515.39990	13.07000	67.87999	0.08810	1982.54980	0.0
18	1078.79980	515.19995	13.08000	67.89000	0.08810	1986.54980	0.0
18	1078.00000	514.59985	13.07000	67.89000	0.08810	1990.54980	0.0
18	1078.19995	514.59985	13.08000	67.87999	0.08810	1994.54980	0.0
18	1078.29980	515.00000	13.10000	67.89000	0.08790	1998.54980	0.0
18	1077.50000	514.59985	13.07000	67.87999	0.08810	2001.71997	0.0
18	1077.89990	513.69995	13.08000	67.87999	0.08810	2010.54980	0.0
18	1079.19995	515.79980	13.09000	67.87000	0.08800	2014.54980	0.0
18	1078.19995	514.89990	13.08000	67.87000	0.08800	2018.54980	0.0
18	1078.09985	515.09985	13.09000	67.87000	0.08800	2022.54980	0.0
18	1077.89990	515.29980	13.08000	67.87000	0.08810	2026.54980	0.0
18	1077.89990	515.59985	13.08000	67.87000	0.08800	2030.54980	0.0
18	1078.09985	516.00000	13.09000	67.87000	0.08800	2034.54980	0.0
18	1076.69995	514.69995	13.08000	67.87000	0.08800	2038.54980	0.0
18	1076.39990	514.29980	13.08000	67.87000	0.08800	2042.54980	0.0
18	1076.09985	514.29980	13.08000	67.87000	0.08800	2046.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIR.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
18	1077.69995	515.89990	13.08000	67.87000	0.08800	2054.54980	0.0
18	1087.59985	519.00000	13.09000	67.87000	0.08800	2058.11987	0.0
18	1081.89990	516.89990	13.09000	67.87000	0.08800	2130.54980	0.0
18	1081.00000	517.29980	13.09000	67.85999	0.08800	2134.54980	0.0
18	1080.69995	517.50000	13.09000	67.87000	0.08800	2138.54980	0.0
18	1080.69995	517.50000	13.09000	67.87000	0.08800	2138.54980	0.0
18	1079.69995	516.19995	13.09000	67.87999	0.08800	2142.54980	0.0
18	1079.69995	516.19995	13.09000	67.87999	0.08800	2142.54980	0.0
18	1077.09985	507.29980	13.09000	67.89000	0.08800	2147.04980	0.0
18	1077.09985	507.29980	13.09000	67.89000	0.08800	2147.04980	0.0
18	1075.09985	504.79980	13.09000	67.89000	0.08800	2150.54980	0.0
18	1075.09985	504.79980	13.09000	67.89000	0.08800	2150.54980	0.0
18	1074.69995	505.19995	13.09000	67.89999	0.08810	2154.54980	0.0
18	1076.19995	505.89990	13.09000	67.89000	0.08800	2154.54980	0.0
18	1076.00000	505.59985	13.08000	67.89000	0.08810	2158.54980	0.0
18	1076.00000	505.59985	13.08000	67.89000	0.08810	2158.54980	0.0
18	1075.19995	505.00000	13.09000	67.89999	0.08800	2162.54980	0.0
18	1075.19995	505.00000	13.09000	67.89999	0.08800	2162.54980	0.0
18	1075.19995	504.59985	13.09000	67.89999	0.08810	2166.54980	0.0
18	1075.19995	504.59985	13.09000	67.89999	0.08810	2166.54980	0.0
18	1074.69995	505.19995	13.09000	67.89999	0.08810	2170.54980	0.0
18	1074.69995	505.19995	13.09000	67.89999	0.08810	2170.54980	0.0
18	1076.09985	505.79980	13.09000	67.89999	0.08800	2174.54980	0.0
18	1076.09985	505.79980	13.09000	67.89999	0.08800	2174.54980	0.0
18	1075.09985	505.00000	12.89000	67.85999	0.08930	2178.54980	0.0
18	1075.09985	505.00000	12.89000	67.85999	0.08930	2178.54980	0.0
18	1075.29980	504.89990	12.88000	67.84999	0.08930	2182.54980	0.0
18	1075.29980	504.89990	12.88000	67.84999	0.08930	2182.54980	0.0
18	1075.19995	503.89990	12.88000	67.84999	0.08940	2186.54980	0.0
18	1075.19995	503.89990	12.88000	67.84999	0.08940	2186.54980	0.0
18	1076.29980	504.39990	12.86000	67.85999	0.08950	2190.54980	0.0
18	1076.29980	504.39990	12.86000	67.85999	0.08950	2190.54980	0.0
18	1075.00000	504.69995	12.89000	67.84999	0.08930	2194.54980	0.0
18	1075.00000	504.69995	12.89000	67.84999	0.08930	2194.54980	0.0
18	1077.29980	513.79980	12.87000	67.82999	0.08940	2220.54980	0.0
18	1077.29980	513.79980	12.87000	67.82999	0.08940	2220.54980	0.0
18	1077.79980	514.00000	12.88000	67.84000	0.08940	2222.54980	0.0
18	1077.79980	514.00000	12.88000	67.84000	0.08940	2222.54980	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***				TIME (HRS)	P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
18	1077.39990	514.39990	12.91000	67.82999	0.08910	2226.54980	0.0
18	1077.39990	514.39990	12.91000	67.82999	0.08910	2226.54980	0.0
18	1079.39990	515.29980	12.91000	67.84000	0.08910	2230.54980	0.0
18	1079.39990	515.29980	12.91000	67.84000	0.08910	2230.54980	0.0
18	1078.19995	513.69995	12.89000	67.84000	0.08920	2234.54980	0.0
18	1078.19995	513.69995	12.89000	67.84000	0.08920	2234.54980	0.0
18	1078.09985	513.59985	12.87000	67.84000	0.08940	2238.54980	0.0
18	1078.09985	513.59985	12.87000	67.84000	0.08940	2238.54980	0.0
18	1078.50000	514.29980	12.87000	67.84000	0.08940	2242.54980	0.0
18	1078.50000	514.29980	12.87000	67.84000	0.08940	2242.54980	0.0
18	1078.19995	513.89990	12.86000	67.84000	0.08950	2246.54980	0.0
18	1077.39990	513.89990	12.87000	67.84000	0.08940	2254.54980	0.0
18	1076.39990	513.39990	12.87000	67.84000	0.08940	2274.54980	0.0
18	1076.39990	513.39990	12.87000	67.84000	0.08940	2274.54980	0.0
18	1075.69995	513.00000	12.89000	67.84000	0.08930	2278.54980	0.0
18	1075.69995	513.00000	12.89000	67.84000	0.08930	2278.54980	0.0
18	1075.59985	512.89990	12.86000	67.84000	0.08950	2282.54980	0.0
18	1075.59985	512.89990	12.86000	67.84000	0.08950	2282.54980	0.0
18	1075.39990	513.09985	12.86000	67.84000	0.08950	2286.54980	0.0
18	1075.39990	513.09985	12.86000	67.84000	0.08950	2286.54980	0.0
18	1073.89990	512.89990	12.90000	67.84000	0.08920	2290.54980	0.0
18	1073.89990	512.89990	12.90000	67.84000	0.08920	2290.54980	0.0
18	1092.19995	522.29980	12.91000	67.81999	0.08910	2298.54932	0.0
18	1074.39990	514.39990	12.89000	67.82999	0.08920	2318.55029	0.0
18	1079.59985	515.79980	12.93000	67.82999	0.08890	2322.54956	0.0
18	1078.29980	516.09985	12.93000	67.82999	0.08900	2326.54907	0.0
18	1075.39990	514.19995	12.93000	67.84000	0.08900	2330.54980	0.0
18	1072.79980	512.79980	12.93000	67.84000	0.08900	2334.55054	0.0
18	1072.50000	513.19995	12.94000	67.84000	0.08890	2338.55005	0.0
18	1071.89990	513.29980	12.93000	67.84000	0.08900	2342.55078	0.0
18	1090.50000	519.50000	12.90000	67.82999	0.08920	2350.54956	0.0
18	1069.69995	510.89990	12.91000	67.84999	0.08920	2358.54956	0.0
18	1070.50000	512.09985	12.91000	67.84999	0.08910	2362.55029	0.0
18	1069.89990	512.00000	12.91000	67.84999	0.08910	2366.54980	0.0
18	1070.39990	512.79980	12.89000	67.84999	0.08930	2370.55054	0.0
18	1071.59985	513.39990	12.90000	67.84999	0.08920	2374.55005	0.0
18	1070.89990	512.59985	12.89000	67.84000	0.08930	2378.54956	0.0
18	1070.39990	511.50000	12.89000	67.84999	0.08930	2382.55005	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

7-124	9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***			TIME	P. FACTOR
	FIX. HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER		
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
18	1071.09985	512.19995	12.89000	67.84999	0.08930	2386.54956	0.0
18	1076.59985	515.59985	12.87000	67.84000	0.08940	2390.55029	0.0
18	1078.00000	515.89990	12.89000	67.82999	0.08930	2398.55029	0.0
18	1077.59985	515.19995	12.88000	67.82999	0.08930	2402.54980	0.0
18	1076.59985	513.89990	12.88000	67.82999	0.08930	2410.55005	0.0
18	1104.69995	526.69995	12.90000	67.82999	0.08920	2462.55029	0.0
18	1078.89990	517.59985	12.90000	67.84000	0.08920	2466.54980	0.0
18	1075.59985	514.79980	12.90000	67.84000	0.08920	2470.54907	0.0
18	1075.50000	513.50000	12.89000	67.84999	0.08930	2474.54980	0.0
18	1076.09985	515.00000	12.90000	67.84999	0.08920	2482.55005	0.0
18	1077.09985	517.19995	12.87000	67.84000	0.08940	2494.54956	0.0
18	1073.39990	515.50000	12.89000	67.84000	0.08920	2498.54907	0.0
18	1073.00000	515.09985	12.89000	67.84999	0.08930	2502.54980	0.0
18	1077.79980	518.69995	12.89000	67.84000	0.08930	2510.54980	0.0
18	1073.00000	516.89990	12.91000	67.84999	0.08920	2514.55054	0.0
18	1073.00000	516.89990	12.91000	67.84999	0.08920	2518.55005	0.0
18	1098.29980	524.50000	12.89000	67.84000	0.08920	2522.54956	0.0
18	1098.59985	525.39990	12.89000	67.84000	0.08920	2526.54907	0.0
18	1098.29980	525.59985	12.88000	67.81000	0.08920	2530.54956	0.0
18	1077.59985	518.59985	12.87000	67.82999	0.08940	2558.54956	0.0
18	1096.39990	524.59985	12.85000	67.81000	0.08950	2566.55078	0.0
18	1096.50000	523.69995	12.84000	67.81000	0.08960	2570.55029	0.0
18	1096.09985	523.39990	12.85000	67.81000	0.08950	2574.54980	0.0
18	1096.69995	524.39990	12.85000	67.79999	0.08940	2578.54932	0.0
18	1096.09985	524.50000	12.86000	67.82999	0.08940	2598.55029	0.0
18	1095.79980	523.50000	12.86000	67.82999	0.08940	2602.54956	0.0
18	1096.39990	524.50000	12.86000	67.82999	0.08940	2606.55029	0.0
18	1096.39990	523.89990	12.85000	67.81000	0.08950	2618.55005	0.0
18	1096.09985	523.39990	12.85000	67.79999	0.08950	2622.55054	0.0
18	1096.19995	523.50000	12.87000	67.81000	0.08930	2626.55005	0.0
18	1111.39990	528.00000	13.07000	67.85999	0.08810	2654.55005	0.0
18	1116.19995	536.89990	12.86000	67.82999	0.08950	2658.55054	0.0
18	1116.59985	537.29980	12.86000	67.82999	0.08940	2662.55005	0.0
18	1116.59985	536.50000	12.86000	67.78000	0.08930	2666.54956	0.0
18	1115.89990	535.59985	12.87000	67.81000	0.08930	2670.54907	0.0
18	1115.89990	536.29980	12.85000	67.79999	0.08950	2674.54956	0.0
18	1121.69995	548.89990	12.84000	67.78000	0.08940	2682.57959	0.0
18	1120.79980	543.79980	12.83000	67.76999	0.08950	2686.55054	0.0

TABLE 7.7.4-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

9-208- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
18	1121.09985	544.09985	12.86000	67.76999	0.08930	2690.55005	0.0
18	1121.49985	543.89980	12.86000	67.76999	0.08920	2694.54956	0.0

AVERAGE VALUES

9-208- 40						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	13.26045	67.50279	0.08592	129.48402	21	
233 - 1045	13.18114	67.76404	0.08713	590.69604	114	
1045 - 1885	13.07509	67.85017	0.08809	1458.96143	169	
1885 - 2400	12.99194	67.86334	0.08863	2149.55371	117	
2400 - 3000	12.87722	67.82146	0.08930	2569.02026	37	

7.7.5 PERFORMANCE TEST DATA

LOT 10 - P-TYPE

$T_H = 1090^{\circ}\text{F}$

$T_C = 520^{\circ}\text{F}$

BATCH	SAMPLE	TOTAL TIME (HR)	FIGURE NUMBER
4A	927	2221	7.7.5-1
	929	2221	7.7.5-2
	945	2221	7.7.5-3
5A	927	2221	7.7.5-4
	928	32	7.7.5-5
	929	2221	7.7.5-6
	936	2215	7.7.5-7
6B	27	2221	7.7.5-8
	28	2177	7.7.5-9
	29	2305	7.7.5-10
7B	27	2305	7.7.5-11
	28	2305	7.7.5-12
	29	2305	7.7.5-13
20A	27	2305	7.7.5-14
	28	2305	7.7.5-15
	29	2305	7.7.5-16

Figure 7.7.5-1. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-927		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1099.79980	533.29980	10.65000	65.37000	0.10030	10.55000	0.0
1	1101.59985	533.59985	10.48000	65.03000	0.10090	14.55000	0.0
1	1101.59985	533.79980	10.41000	64.89000	0.10110	16.54999	0.0
1	1100.69995	532.79980	10.36000	64.81000	0.10140	18.54999	0.0
1	1101.29980	534.89990	10.28000	64.62000	0.10160	22.54999	0.0
1	1100.69995	534.79980	10.22000	64.50999	0.10180	26.54999	0.0
1	1100.39990	534.09985	10.18000	64.40999	0.10190	30.54999	0.0
1	1100.39990	534.50000	10.13000	64.31000	0.10210	34.54999	0.0
1	1069.09985	510.59985	10.19000	64.32999	0.10150	38.54999	0.0
1	1100.39990	527.29980	10.08000	64.28999	0.10250	41.38329	0.0
3	1100.39990	527.50000	10.07000	64.28000	0.10260	42.54999	0.0
3	1081.09985	512.09985	8.44000	58.75000	0.10220	400.38281	0.0
3	1081.09985	512.09985	8.44000	58.75000	0.10220	400.38281	0.0
3	1092.39990	517.59985	8.28000	58.50999	0.10340	403.78296	0.0
3	1108.29980	519.50000	8.05000	58.20999	0.10520	407.78296	0.0
3	1124.39990	516.29980	7.84000	57.87000	0.10680	411.78296	0.0
3	1139.59985	511.79980	7.66000	57.59999	0.10830	415.78296	0.0
3	1142.59985	510.50000	7.62000	57.56000	0.10870	417.08276	0.0
1	974.00000	509.50000	7.81000	55.75999	0.09960	1262.00000	1.44978
1	972.89990	509.50000	7.77000	55.64999	0.09970	1266.00000	1.45547
1	973.89990	510.19995	7.74000	55.56000	0.09970	1640.00000	1.45335
1	974.29980	510.69995	7.71000	55.48999	0.09990	1644.00000	1.45415
1	974.19995	510.79980	7.67000	55.39999	0.10000	1648.00000	1.45560
1	974.89990	511.39990	7.65000	55.34000	0.10000	1652.00000	1.45349
1	975.39990	511.79980	7.63000	55.26999	0.10020	1656.00000	1.45428
1	976.19995	511.79980	7.62000	55.20999	0.10010	1660.00000	1.45072
1	976.50000	511.69995	7.58000	55.14000	0.10020	1664.00000	1.44589
1	977.69995	512.50000	7.56000	55.09000	0.10030	1668.00000	1.44525
1	978.00000	512.59985	7.54000	55.03999	0.10040	1672.00000	1.44460
1	979.00000	513.39990	7.52000	55.00000	0.10060	1675.66992	1.44333
1	1116.89990	536.59985	7.45000	55.76999	0.10430	2176.92017	0.0
1	1087.19995	508.29980	7.32000	54.95000	0.10320	2196.92090	0.0
1	1086.29980	509.59985	7.33000	54.92999	0.10290	2200.92041	0.0
1	1086.29980	509.39990	7.31000	54.93999	0.10310	2204.91992	0.0
1	1086.19995	508.19995	7.32000	54.95000	0.10310	2208.91943	0.0
1	1086.59985	507.50000	7.34000	54.98999	0.10300	2212.92017	0.0
1	1087.89990	508.89990	7.34000	55.03000	0.10310	2216.91968	0.0
1	1087.69995	508.39990	7.35000	55.06999	0.10310	2220.92017	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGE VALUES

10- 4A-927	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
TIME RANGE (HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	10.27726	64.62259	0.10161	26.98936	11
233 - 1045	8.04714	58.17850	0.10526	408.13989	7
1045 - 1885	7.64999	55.32907	0.10006	1592.30566	12
1885 - 2400	7.34500	55.07867	0.10322	2204.91846	8

Figure 7.7.5-2. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-2. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-929		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1085.59985	523.00000	11.81000	66.65999	0.09410	18.54999	0.0
5	1086.19995	523.09985	11.77000	66.60999	0.09420	22.54999	0.0
5	1085.50000	522.50000	11.73000	66.53999	0.09440	26.54999	0.0
5	1085.19995	521.79980	11.69000	66.43999	0.09440	30.54999	0.0
5	1084.50000	521.69995	11.64000	66.39000	0.09470	34.54999	0.0
5	1076.89990	514.50000	11.63000	66.40999	0.09480	38.54999	0.0
5	1095.09985	524.09985	11.52000	66.18999	0.09510	41.38329	0.0
5	1094.69995	524.19995	11.51000	66.17999	0.09510	42.54999	0.0
5	1079.19995	510.19995	8.32000	57.37000	0.09890	400.38281	0.0
5	1088.50000	518.19995	8.15000	57.14999	0.10020	403.78296	0.0
5	1097.59985	518.89990	8.01000	56.90999	0.10110	407.78296	0.0
5	1107.09985	516.29980	7.88000	56.65999	0.10190	411.78296	0.0
5	1120.50000	516.29980	7.75000	56.39999	0.10270	415.78296	0.0
5	1124.39990	516.00000	7.72000	56.35999	0.10290	417.08276	0.0
3	955.00000	514.29980	10.36000	56.62999	0.07740	1632.00000	1.59917
3	954.79980	514.79980	10.27000	56.53000	0.07780	1636.00000	1.60412
3	955.29980	515.00000	10.20000	56.42999	0.07810	1640.00000	1.60370
3	954.89990	514.79980	10.11000	56.28999	0.07840	1644.00000	1.60327
3	955.09985	515.59985	10.06000	56.23999	0.07860	1648.00000	1.60736
3	955.59985	516.39990	10.00000	56.18999	0.07890	1652.00000	1.61020
3	956.00000	516.59985	9.97000	56.10999	0.07890	1656.00000	1.60692
3	956.29980	516.19995	9.94000	56.01999	0.07890	1660.00000	1.60366
3	956.29980	515.89990	9.88000	55.96999	0.07930	1664.00000	1.60202
3	957.09985	516.59985	9.84000	55.92000	0.07950	1668.00000	1.60282
3	956.89990	516.29980	9.79000	55.84999	0.07970	1672.00000	1.60040
3	956.79980	516.00000	9.75000	55.79999	0.07990	1675.66992	1.60120
3	1147.69995	561.09985	9.49000	56.98000	0.08560	2176.92017	0.0
3	1080.50000	510.09985	9.44000	55.60999	0.08190	2196.92090	0.0
3	1084.50000	513.79980	9.50000	55.67000	0.08150	2200.92041	0.0
3	1086.09985	514.19995	9.53000	55.70000	0.08140	2204.91992	0.0
3	1086.19995	512.59985	9.56000	55.70999	0.08120	2208.91943	0.0
3	1086.29980	511.69995	9.60000	55.75999	0.08100	2212.92017	0.0
3	1088.39990	513.50000	9.64000	55.78999	0.08070	2216.91968	0.0
3	1087.79980	513.00000	9.68000	55.84000	0.08050	2220.92017	0.0

(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	11.66249	66.42743	0.09460	31.90414	8
233 - 1045	7.97166	56.80826	0.10128	409.43286	6
1045 - 1885	10.01416	56.16492	0.07878	1653.97217	12
1885 - 2400	9.55500	55.88242	0.08172	2204.91846	8

Figure 7.7.5-3. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-3. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-945		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1092.39990	523.79980	11.97000	66.43999	0.09220	10.55000	0.0
3	1092.69995	524.69995	11.82000	66.14999	0.09260	14.55000	0.0
3	1092.50000	524.59985	11.76000	66.06999	0.09280	16.54999	0.0
3	1092.09985	524.59985	11.71000	66.01999	0.09300	18.54999	0.0
3	1092.39990	525.39990	11.63000	65.89999	0.09330	22.54999	0.0
3	1092.00000	525.19995	11.56000	65.78999	0.09360	26.54999	0.0
3	1091.69995	525.09985	11.50000	65.71999	0.09390	30.54999	0.0
3	1091.50000	525.19995	11.46000	65.65999	0.09410	34.54999	0.0
3	1067.39990	513.69995	11.49000	65.73000	0.09400	38.54999	0.0
3	1103.50000	531.19995	11.37000	65.53000	0.09440	41.38329	0.0
3	1103.79980	531.89990	11.35000	65.50999	0.09450	42.54999	0.0
7	1065.09985	535.29980	8.45000	60.21999	0.10730	383.78296	0.0
7	1067.79980	536.00000	8.34000	60.00000	0.10790	387.78296	0.0
7	1074.89990	537.59985	8.21000	59.79999	0.10890	391.78296	0.0
7	1080.19995	538.89990	8.16000	59.68999	0.10920	393.78296	0.0
7	1086.89990	517.00000	8.04000	59.34000	0.10940	400.38281	0.0
7	1094.00000	516.29980	7.96000	59.20000	0.11010	403.78296	0.0
7	1100.09985	515.00000	7.84000	59.09000	0.11130	407.78296	0.0
7	1100.39990	513.09985	7.81000	59.03999	0.11150	411.78296	0.0
7	1101.59985	513.69995	7.80000	59.00999	0.11160	415.78296	0.0
7	1101.00000	573.69995	7.84000	59.03999	0.11110	417.08276	0.0
5	1050.89990	507.00000	8.81000	58.45999	0.09700	1610.00000	0.0
5	1036.09985	514.39990	8.83000	58.42000	0.09670	1612.00000	0.0
5	1028.29980	512.89990	8.76000	58.15999	0.09650	1616.00000	0.0
5	1026.89990	509.29980	8.72000	57.67000	0.09530	1620.00000	0.0
5	1026.89990	513.29980	8.63000	57.78000	0.09670	1624.00000	0.0
5	1028.69995	514.00000	8.13000	56.20999	0.09710	1632.00000	1.19877
5	1029.29980	514.69995	8.07000	56.10999	0.09750	1636.00000	1.20074
5	1030.79980	515.59985	8.03000	55.98999	0.09760	1640.00000	1.19902
5	1032.09985	516.89990	7.98000	55.92999	0.09800	1644.00000	1.19804
5	1032.89990	517.19995	7.93000	55.82999	0.09820	1648.00000	1.19610
5	1035.39990	519.09985	7.92000	55.78999	0.09820	1652.00000	1.19320
5	1037.39990	520.19995	7.86000	55.71999	0.09880	1656.00000	1.19036
5	1039.39990	520.29980	7.85000	55.68999	0.09880	1660.00000	1.18182
5	1042.09985	521.19995	7.80000	55.60999	0.09910	1664.00000	1.17556
5	1045.00000	523.09985	7.77000	55.59000	0.09940	1668.00000	1.17217
5	1047.09985	524.00000	7.74000	55.57999	0.09980	1672.00000	1.16725
5	1048.79980	524.69995	7.73000	55.56999	0.09990	1675.66992	1.16434

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1119.29980	555.39990	7.35000	55.78999	0.10590	2176.92017	0.0
5	1078.19995	515.19995	7.25000	53.40999	0.09840	2196.92090	0.0
5	1080.39990	517.39990	7.23000	53.70999	0.09970	2200.92041	0.0
5	1081.29980	514.39990	7.24000	53.59999	0.09920	2204.91992	0.0
5	1081.19995	514.89990	7.21000	53.81000	0.10030	2208.91943	0.0
5	1081.39990	512.00000	7.23000	53.68999	0.09960	2212.92017	0.0
5	1082.50000	513.69995	7.23000	53.81999	0.10010	2220.92017	0.0

AVERAGE VALUES						
10- 4A-945						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	11.60181	65.86536	0.09349	26.98936	11	
233 - 1045	8.04499	59.44289	0.10983	401.37280	10	
1045 - 1885	8.15058	56.47696	0.09792	1642.92163	17	
1885 - 2400	7.24857	53.97565	0.10046	2203.20410	7

Figure 7.7.5-4. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

10 - 5 A - 927

TABLE 7.7.5-4. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-927		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(N OHM)	(MV)	(WATT)	(HRS)	
7	1087.00000	537.39990	12.32000	68.20999	0.09440	10.55000	0.0
7	1084.29980	538.09985	12.27000	68.59000	0.09590	14.55000	0.0
7	1078.79980	538.39990	12.36000	69.46999	0.09770	16.54999	0.0
7	1061.29980	537.69995	12.53000	71.67000	0.10250	18.54999	0.0
7	1046.19995	538.09985	12.66000	73.87000	0.10780	22.54999	0.0
7	1040.89990	543.39990	13.28000	84.37000	0.13400	38.54999	0.0
7	1077.69995	517.69995	12.00000	68.12000	0.09670	41.38329	0.0
7	1076.19995	516.59985	12.01000	69.37000	0.10020	42.54999	0.0
9	1076.19995	504.69995	11.05000	64.31000	0.09360	400.38281	0.0
9	1096.69995	521.50000	10.93000	64.20000	0.09420	403.78296	0.0
9	1105.89990	521.19995	10.78000	64.06000	0.09510	407.78296	0.0
9	1115.00000	518.19995	10.67000	63.92999	0.09580	411.78296	0.0
9	1123.50000	516.00000	10.55000	63.87999	0.09600	415.78296	0.0
9	1125.09985	515.00000	10.51000	63.82999	0.09700	417.08276	0.0
7	1142.89990	445.29980	9.33000	61.26999	0.10060	1610.00000	0.0
9	1142.29980	573.69995	8.85000	60.98000	0.10500	2176.92017	0.0
9	1079.29980	514.09985	8.44000	59.57999	0.10520	2196.92090	0.0
9	1080.00000	514.59985	8.44000	59.57999	0.10510	2200.92041	0.0
9	1081.09985	515.29980	8.43000	59.59999	0.10540	2204.91992	0.0
9	1080.89990	514.59985	8.43000	59.59000	0.10540	2208.91943	0.0
9	1080.39990	513.69995	8.42000	59.59000	0.10550	2212.92017	0.0
9	1080.50000	513.50000	8.42000	59.59999	0.10550	2216.91968	0.0
9	1081.19995	515.50000	8.42000	59.64000	0.10560	2220.92017	0.0

AVERAGE VALUES

10- 5A-927						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(N OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.42875	71.70868	0.10365	25.65414	8	
233 - 1045	10.74833	64.03491	0.09528	409.43286	6	
1045 - 1885	9.33000	61.26999	0.10060	1610.00000	1	
1885 - 2400	8.48125	59.76993	0.10534	2204.91846	8

Figure 7.7.5-5. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-5. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-928		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
9	1095.79980	528.29980	12.83000	68.89000	0.09250	10.55000	0.0
9	1096.09985	529.29980	12.85000	68.90999	0.09240	14.55000	0.0
9	1096.09985	529.50000	12.86000	68.93999	0.09240	16.54999	0.0
9	1097.59985	530.50000	12.86000	68.92999	0.09240	19.54999	0.0
9	1098.59985	531.50000	12.82000	68.84000	0.09250	22.54999	0.0
9	1098.29980	531.59985	12.76000	68.78999	0.09270	26.54999	0.0
9	1098.29980	531.50000	12.71000	68.70999	0.09280	30.54999	0.0
9	1098.00000	531.69995	12.66000	68.65999	0.09310	34.54999	0.0
9	1062.09985	510.59985	12.68000	68.85999	0.09350	38.54999	0.0
9	1101.29980	533.19995	12.61000	68.51999	0.09310	41.38329	0.0
9	1102.50000	534.69995	12.59000	68.50000	0.09310	42.54999	0.0

AVERAGE VALUES

10- 5A-928					
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	12.74817	68.77718	0.09277	27.08028	11

Figure 7.7.5-6. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-6. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-929		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
11	1037.50000	507.29980	13.09000	69.70999	0.09280	10.55000	0.0
11	1037.69995	508.59985	13.14000	69.75000	0.09250	12.70000	0.0
11	1037.59985	508.09985	13.11000	69.75000	0.09270	14.55000	0.0
11	1039.19995	508.69995	13.14000	69.75999	0.09260	18.54999	0.0
11	1040.29980	510.09985	13.11000	69.70000	0.09260	22.54999	0.0
11	1040.09985	510.79980	13.05000	69.54999	0.09270	26.70000	0.0
11	1039.89990	511.09985	13.02000	69.48999	0.09270	30.70000	0.0
11	1057.00000	512.69995	12.86000	69.37000	0.09350	37.53329	0.0
11	1113.79980	545.69995	12.78000	68.96999	0.09310	38.54999	0.0
11	1055.09985	511.50000	12.87000	69.37999	0.09350	38.70000	0.0
11	1070.59985	496.29980	11.56000	65.00999	0.09140	396.53296	0.0
11	1105.59985	528.89990	11.47000	64.50999	0.09070	399.93286	0.0
11	1118.69995	530.50000	11.32000	64.39999	0.09150	403.93286	0.0
11	1131.69995	528.89990	11.26000	64.23999	0.09170	407.93286	0.0
11	1143.50000	527.29980	11.18000	64.17000	0.09210	411.93286	0.0
11	1145.00000	526.29980	11.13000	64.15999	0.09240	413.23291	0.0
9	1042.19995	518.79980	10.41000	61.81999	0.09170	1610.00000	0.0
9	1011.19995	532.19995	9.70000	60.00000	0.09280	1632.00000	1.37481
9	1013.59985	533.89990	9.65000	59.92999	0.09310	1636.00000	1.37113
9	1015.00000	534.50000	9.59000	59.82999	0.09330	1640.00000	1.36804
9	1013.69995	532.69995	9.55000	59.71999	0.09340	1644.00000	1.36350
9	1017.00000	535.69995	9.50000	59.68999	0.09370	1648.00000	1.36192
9	1019.69995	537.19995	9.43000	59.54999	0.09400	1656.00000	1.35642
9	1021.00000	537.09985	9.40000	59.46999	0.09410	1660.00000	1.35007
9	1022.39990	537.50000	9.36000	59.42000	0.09420	1664.00000	1.34379
9	1023.09985	536.50000	9.33000	59.34000	0.09440	1668.00000	1.33711
9	1024.39990	536.69995	9.30000	59.28999	0.09450	1672.00000	1.33099
9	1025.59985	536.59985	9.25000	59.23999	0.09490	1675.66992	1.32542
11	1123.79980	532.69995	8.77000	58.14000	0.09630	2176.92017	0.0
11	1082.50000	512.00000	8.65000	57.39000	0.09520	2196.92090	0.0
11	1083.09985	513.00000	8.66000	57.40999	0.09510	2200.92041	0.0
11	1083.09985	513.79980	8.66000	57.43999	0.09520	2208.91943	0.0
11	1083.19995	513.39990	8.67000	57.45999	0.09520	2212.92017	0.0
11	1083.79980	514.09985	8.67000	57.48000	0.09530	2216.91968	0.0
11	1084.09985	516.00000	8.67000	57.51999	0.09540	2220.92017	0.0

	(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233		13.01699	69.54294	0.09287	25.10832	10
233 - 1045		11.31999	64.41495	0.09163	405.58276	6
1045 - 1885		9.53916	59.77492	0.09367	1650.47217	12
1885 - 2400		8.67857	57.54851	0.09539	2204.91846	7

Figure 7.7.5-7. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-7. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-936		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
15	1101.00000	527.69995	13.19000	69.12999	0.09060	3.63333	0.0
15	1086.89990	520.00000	13.13000	68.93999	0.09050	18.34999	0.0
15	1085.69995	519.39990	13.09000	68.89999	0.09060	20.93329	0.0
15	1086.09985	520.00000	13.08000	68.82999	0.09050	24.83330	0.0
15	1085.69995	519.09985	13.03000	68.78999	0.09080	28.95000	0.0
15	1085.59985	518.89990	12.99000	68.73000	0.09090	32.96669	0.0
15	1085.00000	518.09985	12.96000	68.67999	0.09100	36.96669	0.0
15	1084.69995	517.89990	12.92000	68.62999	0.09120	40.95000	0.0
15	1083.69995	508.50000	10.75000	64.17999	0.09580	396.81689	0.0
15	1087.89990	508.69995	10.63000	63.96999	0.09630	400.81689	0.0
15	1095.19995	511.79980	10.50000	63.78999	0.09690	404.81689	0.0
15	1072.29980	502.09985	10.38000	63.62000	0.09740	408.81689	0.0
15	1076.19995	501.39990	10.34000	63.51999	0.09760	412.81689	0.0
15	1079.89990	498.69995	10.25000	63.40999	0.09810	416.81689	0.0
15	1082.39990	495.19995	10.20000	63.32999	0.09830	420.81689	0.0
15	1084.00000	495.19995	10.14000	63.28000	0.09880	424.81689	0.0
15	1085.09985	495.50000	10.14000	63.25000	0.09860	428.81689	0.0
15	1085.50000	496.09985	10.12000	63.21999	0.09870	432.81689	0.0
15	1085.39990	496.59985	10.11000	63.20000	0.09880	436.81689	0.0
15	1085.50000	496.69995	10.09000	63.18999	0.09890	440.81689	0.0
15	1085.69995	496.09985	10.08000	63.17999	0.09900	444.81689	0.0
15	1086.00000	496.59985	10.04000	63.17999	0.09940	448.81689	0.0
15	1085.59985	496.50000	9.98000	63.17999	0.10000	452.81689	0.0
15	1085.69995	496.79980	10.03000	63.18999	0.09960	456.81689	0.0
15	1085.50000	496.50000	10.04000	63.17000	0.09940	460.81689	0.0
15	1085.69995	496.50000	10.03000	63.17000	0.09950	464.81689	0.0
19	1019.00000	518.59985	9.76000	60.75999	0.09460	1743.39990	1.26471
19	1008.69995	518.50000	9.64000	60.42000	0.09470	1747.39990	1.31345
19	1006.59985	518.19995	9.55000	60.21999	0.09500	1751.39990	1.32128
19	1006.69995	519.19995	9.47000	60.06000	0.09520	1755.39990	1.32591
19	1007.09985	519.69995	9.40000	59.93999	0.09560	1759.39990	1.32778
19	1085.50000	551.89990	9.39000	60.54999	0.09770	1767.39990	1.13605
19	1087.19995	552.69995	9.30000	60.37999	0.09800	1771.39990	1.13164
19	1094.19995	557.19995	9.13000	60.17000	0.09910	1779.39990	1.12486
19	1078.09985	515.09985	9.04000	59.68999	0.09860	1783.39990	0.0
19	1082.00000	517.29980	8.99000	59.64000	0.09890	1787.39990	0.0
21	1082.79980	486.29980	10.64000	56.00999	0.07370	2275.40015	0.0
21	1059.89990	482.59985	10.50000	55.45000	0.07320	2283.40015	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
21	1067.29980	486.79980	10.49000	55.50000	0.07340	2287.40088	0.0
21	1077.19995	490.59985	10.47000	55.56000	0.07370	2291.40039	0.0
21	1088.89990	492.50000	10.41000	55.64999	0.07430	2295.39966	0.0
21	1097.59985	490.59985	10.32000	55.75000	0.07530	2299.40039	0.88797
21	1101.29980	488.39990	10.30000	55.79999	0.07550	2303.39990	0.87182
21	1103.09985	487.00000	10.27000	55.81000	0.07580	2307.39941	0.86431
21	1104.09985	488.09985	10.27000	55.81999	0.07580	2311.40015	0.86431
21	1090.69995	498.50000	10.29000	55.64999	0.07520	2315.40063	0.0

AVERAGE VALUES						
10- 5A-936	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	13.04874	68.82867	0.09076	25.94791	8	
233 - 1045	10.21388	63.39049	0.09839	430.81641	18	
1045 - 1885	9.36699	60.18292	0.09674	1764.59863	10	
1885 - 2400	10.39599	55.69992	0.07459	2296.99829	10

Figure 7.7.5-8. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-8. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 6B- 27		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
13	1088.19995	525.69995	12.78000	66.39000	0.08620	10.55000	0.0
13	1088.19995	526.39990	12.65000	66.20999	0.08660	14.55000	0.0
13	1088.19995	526.69995	12.60000	66.14000	0.08680	16.54999	0.0
13	1089.09985	526.89990	12.56000	66.06999	0.08690	18.54999	0.0
13	1089.39990	527.09985	12.49000	65.93999	0.08700	22.54999	0.0
13	1089.19995	527.29980	12.44000	65.84999	0.08720	26.54999	0.0
13	1089.09985	527.50000	12.38000	65.81000	0.08740	30.54999	0.0
13	1089.09985	527.69995	12.32000	65.71999	0.08770	34.54999	0.0
13	1069.69995	510.50000	12.32000	65.81000	0.08790	38.54999	0.0
13	1099.29980	528.89990	12.22000	65.54999	0.08790	41.38329	0.0
13	1100.09985	529.89990	12.20000	65.56000	0.08800	42.54999	0.0
13	1033.59985	497.00000	8.74000	58.87999	0.09920	1610.00000	0.0
13	982.50000	512.59985	7.97000	56.54999	0.10030	1632.00000	1.41867
13	982.39990	513.09985	7.57000	56.25999	0.10460	1636.00000	1.42313
13	982.19995	513.09985	7.58000	56.20000	0.10410	1640.00000	1.42213
13	983.09985	514.29980	7.54000	56.10999	0.10440	1644.00000	1.42428
13	982.59985	513.79980	7.56000	56.04999	0.10400	1648.00000	1.42466
13	983.89990	515.00000	7.53000	55.98000	0.10400	1652.00000	1.42466
13	984.79980	515.50000	7.50000	55.92999	0.10420	1656.00000	1.42156
13	985.50000	515.19995	7.49000	55.84999	0.10420	1660.00000	1.41576
13	986.29980	515.19995	7.46000	55.78000	0.10430	1664.00000	1.41328
13	988.39990	517.00000	7.43000	55.75000	0.10460	1668.00000	1.41161
13	989.79980	518.19995	7.41000	55.70000	0.10470	1672.00000	1.40915
13	1127.50000	542.09985	7.59000	56.09000	0.10360	2176.92017	0.0
13	1083.19995	508.50000	7.37000	55.17000	0.10320	2196.92090	0.0
13	1079.89990	510.00000	7.39000	55.14999	0.10290	2200.92041	0.0
13	1079.79980	509.19995	7.38000	55.14000	0.10300	2204.91992	0.0
13	1079.59985	508.29980	7.35000	55.14000	0.10340	2208.91943	0.0
13	1079.79980	507.59985	7.36000	55.15999	0.10340	2212.92017	0.0
13	1080.79980	508.59985	7.36000	55.20000	0.10350	2216.91968	0.0
13	1080.79980	509.19995	7.38000	55.23000	0.10330	2220.92017	0.0

AVERAGE VALUES

10- 6B- 27						
TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA	
0 - 233	12.45090	65.91353	0.08724	26.98936	11	
1045 - 1885	7.64833	56.25325	0.10355	1648.50000	12	
1885 - 2400	7.39749	55.28497	0.10329	2204.91846	8

Figure 7.7.5-9. TELPS Leg Performance Data Normalized to $TH = 1090$ (F) $TC = 520$ (F)

TABLE 7.7.5-9. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 68- 28		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
15	1085.89990	524.50000	11.78000	66.73999	0.09450	0.16550	0.0
15	1085.00000	523.29980	11.94000	66.98999	0.09400	10.55000	0.0
15	1085.69995	524.00000	11.84000	66.81999	0.09430	14.55000	0.0
15	1085.89990	524.39990	11.76000	66.68999	0.09450	18.54999	0.0
15	1085.59985	524.39990	11.72000	66.62000	0.09460	22.54999	0.0
15	1085.19995	524.19995	11.68000	66.53999	0.09470	26.54999	0.0
15	1085.89990	525.39990	11.64000	66.46999	0.09490	30.54999	0.0
15	1085.29980	525.00000	11.61000	66.42000	0.09500	34.54999	0.0
15	1076.69995	512.59985	11.62000	66.50000	0.09510	38.54999	0.0
15	1098.59985	527.19995	11.54000	66.31000	0.09530	41.38329	0.0
15	1099.19995	528.09985	11.52000	66.28999	0.09530	42.54999	0.0
15	1030.29980	536.29980	9.39000	62.00000	0.10230	381.00000	0.0
15	1026.00000	537.00000	9.42000	61.84999	0.10160	383.78296	0.0
15	1026.00000	537.59985	9.25000	61.67000	0.10280	387.78296	0.0
15	1028.79980	538.19995	9.16000	61.50000	0.10320	391.78296	0.0
15	1028.39990	537.29980	9.12000	61.43999	0.10350	393.78296	0.0
15	1082.89990	512.09985	8.77000	60.89999	0.10580	400.38281	0.0
15	1090.89990	514.39990	8.63000	60.76999	0.10690	403.78296	0.0
15	1101.59985	514.09985	8.56000	60.62000	0.10730	407.78296	0.0
15	1111.09985	512.39990	8.47000	60.48000	0.10800	411.78296	0.0
15	1119.29980	511.79980	8.42000	60.39999	0.10840	415.78296	0.0
15	1119.89990	509.89990	8.41000	60.34999	0.10830	417.08276	0.0
15	969.69995	509.69995	7.97000	57.03000	0.10200	1632.00000	1.47612
15	970.19995	511.19995	7.94000	56.93999	0.10210	1636.00000	1.48186
15	970.09985	511.29980	7.90000	56.84999	0.10230	1640.00000	1.48261
15	970.50000	512.09985	7.88000	56.76999	0.10230	1644.00000	1.48692
15	969.69995	511.59985	7.85000	56.67999	0.10240	1648.00000	1.48837
15	970.69995	512.79980	7.81000	56.60999	0.10250	1652.00000	1.48766
15	971.19995	513.00000	7.78000	56.53000	0.10280	1656.00000	1.48770
15	971.89990	512.89990	7.76000	56.48000	0.10280	1660.00000	1.48127
15	972.29980	512.69995	7.73000	56.40999	0.10290	1664.00000	1.47845
15	974.50000	514.50000	7.71000	56.37999	0.10310	1668.00000	1.47708
15	975.29980	515.09985	7.68000	56.31999	0.10320	1672.00000	1.47429
15	976.59985	516.09985	7.65000	56.28000	0.10350	1675.66992	1.47226
19	1109.89990	551.29980	8.29000	56.84999	0.09740	2176.92017	0.0

(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	11.69545	66.58081	0.09475	25.49986	11
233 - 1045	8.87272	61.08902	0.10528	399.52051	11
1045 - 1885	7.80499	56.60657	0.10266	1653.97217	12
1885 - 2400	8.29000	56.84999	0.09740	2176.92017	1

Figure 7.7.5-10. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-10. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 68- 29		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1100.39990	514.50000	13.25000	68.67999	0.08900	3.63333	0.0
1	1087.29980	518.59985	13.28000	68.48999	0.08830	18.34999	0.0
1	1084.50000	517.00000	13.27000	68.50999	0.08840	20.93329	0.0
1	1084.39990	518.09985	13.26000	68.46999	0.08840	24.83330	0.0
1	1083.39990	517.00000	13.24000	68.45999	0.08850	28.95000	0.0
1	1083.00000	516.50000	13.22000	68.43999	0.08860	32.96669	0.0
1	1082.59985	516.79980	13.20000	68.71999	0.08860	36.96669	0.0
1	1082.69995	517.29980	13.18000	68.39000	0.08870	40.95000	0.0
1	1045.59985	453.00000	10.17000	63.18999	0.09820	396.81689	0.0
1	1042.50000	448.39990	10.16000	63.12000	0.09810	400.81689	0.0
1	1042.59985	448.79980	10.13000	63.09999	0.09830	404.81689	0.0
1	1086.09985	493.00000	9.94000	63.28000	0.10070	408.81689	0.0
1	1086.89990	494.29980	9.90000	63.28000	0.10120	412.81689	0.0
1	1086.09985	493.59985	9.86000	63.25999	0.10140	416.81689	0.0
1	1085.89990	493.19995	9.86000	63.23999	0.10130	420.81689	0.0
1	1085.79980	494.69995	9.87000	63.23999	0.10130	424.81689	0.0
1	1086.39990	495.29980	9.86000	63.23999	0.10140	428.81689	0.0
1	1086.00000	495.79980	9.85000	63.23999	0.10150	432.81689	0.0
1	1085.89990	497.09985	9.84000	63.21999	0.10150	436.81689	0.0
1	1086.09985	498.09985	9.83000	63.20999	0.10160	440.81689	0.0
1	1086.39990	499.29980	9.81000	63.18999	0.10170	444.81689	0.0
1	1086.50000	500.19995	9.78000	63.17999	0.10200	448.81689	0.0
1	1086.00000	500.79980	9.75000	63.14999	0.10230	452.81689	0.0
1	1086.09985	501.50000	9.78000	63.12999	0.10190	456.81689	0.0
1	1085.79980	501.50000	9.73000	63.09999	0.10230	460.81689	0.0
1	1086.09985	501.39990	9.77000	63.09000	0.10190	464.81689	0.0
1	1018.00000	537.29980	9.14000	60.45000	0.10000	1733.39990	1.36612
1	1014.50000	537.00000	9.04000	60.21999	0.10030	1737.39990	1.38345
1	1013.59985	536.69995	8.99000	60.06999	0.10030	1741.39990	1.38536
1	1016.19995	538.69995	8.95000	59.98000	0.10050	1745.39990	1.38430
1	1015.50000	537.89990	8.90000	59.85999	0.10070	1749.39990	1.38324
1	1072.79980	560.50000	8.93000	60.43999	0.10230	1753.39990	1.22515
1	1075.00000	543.69995	8.85000	60.21999	0.10250	1757.39990	1.14143
1	1076.69995	544.89990	8.76000	60.10999	0.10310	1761.39990	1.13923
1	1078.19995	545.29980	8.73000	60.01999	0.10310	1765.39990	1.13546
1	1077.19995	516.69995	8.64000	59.65999	0.10290	1773.39990	0.0
1	1080.19995	518.89990	8.61000	59.60999	0.10320	1777.39990	0.0
1	1061.00000	499.79980	8.22000	57.39000	0.10020	2265.39966	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1046.09985	497.89990	8.16000	57.17999	0.10010	2269.40039	0.0
1	1043.00000	495.89990	8.15000	57.10999	0.10010	2273.40088	0.0
1	1045.09985	498.29980	8.14000	57.12000	0.10020	2277.40039	0.0
1	1045.59985	498.59985	8.12000	57.09000	0.10040	2281.39990	0.0
1	1047.69995	500.09985	8.11000	57.09999	0.10050	2285.39917	0.0
1	1050.50000	502.79980	8.11000	57.12999	0.10060	2289.39990	0.0
1	1052.50000	503.89990	8.11000	57.14000	0.10070	2293.39941	0.0
1	1054.79980	504.09985	8.10000	57.12999	0.10070	2297.40015	0.0
1	1056.89990	505.29980	8.10000	57.15999	0.10090	2301.40088	0.0
1	1080.69995	520.89990	8.10000	57.50999	0.10210	2305.40039	0.0

AVERAGE VALUES						
10- 68- 29						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	13.23749	68.51996	0.08856	25.94791	8	
233 - 1045	9.88277	63.19215	0.10103	430.81641	18	
1045 - 1885	8.86727	60.05811	0.10172	1754.12598	11	
1885 - 2400	8.12908	57.18718	0.10059	2285.39844	11

Figure 7.7.5-11. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-11. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 7B- 27		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1096.29980	522.09985	12.80000	67.93999	0.09020	3.63333	0.0
3	1076.50000	514.00000	12.83000	68.06000	0.09030	18.34999	0.0
3	1076.00000	513.59985	12.82000	68.03000	0.09030	20.93329	0.0
3	1077.19995	515.29980	12.81000	68.00000	0.09030	24.83330	0.0
3	1078.00000	513.50000	12.78000	68.00999	0.09050	28.95000	0.0
3	1080.19995	514.59985	12.76000	67.98000	0.09050	32.96669	0.0
3	1080.19995	515.00000	12.74000	67.93999	0.09060	36.96669	0.0
3	1080.29980	515.79980	12.73000	67.92000	0.09060	40.95000	0.0
3	1096.89990	504.69995	10.37000	62.60999	0.09450	396.81689	0.0
3	1103.19995	505.09985	10.23000	62.37000	0.09510	400.81689	0.0
3	1115.00000	508.59985	10.07000	62.18999	0.09600	404.81689	0.0
3	1077.69995	491.69995	10.01000	61.98999	0.09590	408.81689	0.0
3	1080.50000	490.79980	9.97000	61.90999	0.09610	412.81689	0.0
3	1082.29980	489.00000	10.09000	61.82999	0.09470	416.81689	0.0
3	1084.09985	487.39990	9.84000	61.70000	0.09670	420.81689	0.0
3	1085.39990	487.79980	9.83000	61.67000	0.09670	424.81689	0.0
3	1086.29980	488.00000	9.82000	61.67999	0.09690	428.81689	0.0
3	1087.19995	488.29980	9.79000	61.62999	0.09700	432.81689	0.0
3	1087.50000	489.09985	9.76000	61.62000	0.09720	436.81689	0.0
3	1087.79980	489.00000	9.74000	61.57999	0.09730	440.81689	0.0
3	1088.39990	489.00000	9.79000	61.56000	0.09680	444.81689	0.0
3	1088.50000	488.89990	9.72000	61.56000	0.09740	448.81689	0.0
3	1087.79980	488.79980	9.67000	61.57999	0.09800	452.81689	0.0
3	1088.19995	489.00000	9.82000	61.56999	0.09650	456.81689	0.0
3	1088.19995	488.89990	9.64000	61.54999	0.09820	460.81689	0.0
3	1088.79980	489.09985	9.65000	61.50999	0.09810	464.81689	0.0
3	978.79980	527.09985	10.73000	59.65999	0.08290	1749.39990	1.52952
3	1054.29980	546.79980	10.75000	60.35999	0.08470	1753.39990	1.24012
3	1085.69995	561.39990	10.63000	60.54999	0.08630	1757.39990	1.17575
3	1087.00000	562.39990	10.51000	60.42000	0.08680	1761.39990	1.17456
3	1088.19995	562.69995	10.43000	60.29999	0.08710	1765.39990	1.17070
3	1090.39990	564.39990	10.33000	60.20000	0.08770	1769.39990	1.16933
3	1079.50000	535.39990	10.23000	59.78999	0.08740	1773.39990	0.0
3	1081.59985	536.69995	10.21000	59.73999	0.08740	1777.39990	0.0
3	1057.50000	501.69995	12.73000	56.75000	0.06330	2265.39966	0.0
3	1042.09985	502.89990	12.47000	56.57999	0.06420	2269.40039	0.0
3	1037.50000	501.09985	12.42000	56.50999	0.06430	2273.40088	1.10862
3	1038.59985	503.19995	12.46000	56.51999	0.06410	2277.40039	1.11478

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1038.29980	503.19995	12.49000	56.48999	0.06390	2281.39990	1.11518
3	1039.69995	504.50000	12.50000	56.50000	0.06380	2285.39917	1.11538
3	1041.19995	506.29980	12.52000	56.51999	0.06380	2289.39990	1.11734
3	1042.19995	506.69995	12.50000	56.50999	0.06390	2293.39941	0.0
3	1043.69995	506.39990	12.49000	56.48000	0.06390	2297.40015	1.10938
3	1045.39990	507.79980	12.47000	56.48999	0.06400	2301.40088	1.10727
3	1064.79980	519.19995	12.40000	56.75000	0.06490	2305.40039	0.0

AVERAGE VALUES						
10- 7B- 27	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.78374	67.98492	0.09041	25.94791	8	
233 - 1045	9.87833	61.78377	0.09662	430.81641	18	
1045 - 1885	10.47749	60.12744	0.08629	1763.39893	8	
1885 - 2400	12.49545	56.55447	0.06401	2285.39844	11

Figure 7.7.5-12. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-12. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 78- 28		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1079.09985	515.50000	12.27000	67.14000	0.09180	3.63333	0.0
5	1086.19995	519.79980	12.24000	66.96999	0.09160	18.34999	0.0
5	1085.29980	518.19995	12.24000	66.96999	0.09160	20.93329	0.0
5	1086.19995	519.89990	12.21000	66.89999	0.09160	24.83330	0.0
5	1085.09985	517.79980	12.20000	66.89000	0.09170	28.95000	0.0
5	1085.00000	517.59985	12.19000	66.87999	0.09170	32.96669	0.0
5	1084.79980	518.09985	12.18000	66.82999	0.09170	36.96669	0.0
5	1085.09985	519.00000	12.15000	66.78999	0.09180	40.95000	0.0
5	1097.29980	518.59985	10.06000	62.06000	0.09570	396.81689	0.0
5	1103.89990	517.69995	9.94000	61.59999	0.09550	400.81689	0.0
5	1113.79980	519.50000	9.84000	61.28000	0.09540	404.81689	0.0
5	1096.00000	512.00000	9.71000	61.25000	0.09660	408.81689	0.0
5	1098.39990	514.59985	9.66000	61.35999	0.09750	412.81689	0.0
5	1103.09985	511.29980	9.53000	61.20999	0.09820	416.81689	0.0
5	1108.09985	505.59985	9.45000	60.89000	0.09810	420.81689	0.0
5	1112.59985	505.69995	9.46000	60.85999	0.09790	424.81689	0.0
5	1116.59985	505.59985	9.41000	60.79999	0.09830	428.81689	0.0
5	1117.79980	508.19995	9.37000	60.98999	0.09930	432.81689	0.0
5	1118.69995	506.29980	9.36000	60.70999	0.09840	436.81689	0.0
5	1119.29980	507.50000	9.33000	60.87999	0.09910	440.81689	0.0
5	1119.89990	507.19995	9.31000	60.78999	0.09920	444.81689	0.0
5	1120.79980	509.79980	9.26000	60.95999	0.10030	448.81689	0.0
5	1119.89990	509.39990	9.26000	60.98000	0.10030	452.81689	0.0
5	1120.50000	509.59985	9.26000	60.95000	0.10030	456.81689	0.0
5	1120.19995	508.50000	9.26000	60.89000	0.10010	460.81689	0.0
5	1120.50000	509.59985	9.27000	60.98999	0.10030	464.81689	0.0
5	1033.00000	519.50000	8.77000	58.62999	0.09800	1733.39990	1.20541
5	1030.29980	515.39990	8.73000	58.09999	0.09670	1737.39990	1.19827
5	1031.00000	519.00000	8.70000	58.28000	0.09770	1741.39990	1.21366
5	1032.09985	519.89990	8.64000	58.15999	0.09790	1745.39990	1.21163
5	1033.89990	521.59985	8.60000	58.07999	0.09800	1749.39990	1.21137
5	1070.09985	528.59985	8.62000	58.40999	0.09890	1753.39990	0.0
5	1098.09985	546.50000	8.61000	58.39999	0.09900	1757.39990	0.0
5	1100.79980	551.00000	8.54000	58.53000	0.10030	1761.39990	0.0
5	1103.50000	552.29980	8.49000	58.40999	0.10050	1765.39990	0.0
5	1106.00000	554.29980	8.43000	58.37000	0.10100	1769.39990	0.0
5	1066.09985	522.50000	8.33000	57.70999	0.10000	1773.39990	0.0
5	1067.69995	521.39990	8.32000	57.46999	0.09920	1777.39990	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1058.79980	508.79980	7.60000	55.09000	0.09980	2265.39966	0.0
5	1047.00000	508.89990	7.56000	55.12000	0.10040	2269.40039	1.10573
5	1044.79980	506.39990	7.55000	55.00999	0.10020	2273.40088	1.10352
5	1047.19995	508.19995	7.54000	54.98999	0.10020	2277.40039	1.10231
5	1048.29980	509.19995	7.57000	55.00000	0.09990	2281.39990	1.10143
5	1050.59985	511.50000	7.53000	55.03999	0.10060	2285.39917	1.10186
5	1052.79980	513.09985	7.52000	55.07999	0.10080	2289.39990	1.10044
5	1053.79980	512.39990	7.52000	55.03000	0.10070	2293.39941	0.0
5	1055.89990	511.00000	7.52000	54.95000	0.10040	2297.40015	0.0
5	1058.29980	510.29980	7.53000	54.81000	0.09970	2301.40088	0.0
5	1076.89990	525.69995	7.50000	55.40999	0.10230	2305.40039	0.0

AVERAGE VALUES						
10- 78- 28	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE (HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.20999	66.92114	0.09169	25.94791	8	
233 - 1045	9.48555	61.08047	0.09836	430.81641	18	
1045 - 1885	8.56499	58.21242	0.09893	1755.39868	12	
1885 - 2400	7.53999	55.04810	0.10045	2285.39844	11

Figure 7.7.5-13. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-13. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 78- 29		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
7	1143.19995	530.09985	11.79000	67.59999	0.09690	20.93329	0.0
7	1143.19995	531.50000	11.82000	67.65999	0.09680	24.83330	0.0
7	1142.89990	531.19995	11.85000	67.67999	0.09660	28.95000	0.0
7	1143.50000	531.00000	11.84000	67.59999	0.09650	32.96669	0.0
7	1142.00000	531.09985	11.87000	67.71999	0.09660	36.96669	0.0
7	1142.59985	531.50000	11.86000	67.60999	0.09640	40.95000	0.0
7	1079.69995	511.69995	10.41000	63.03000	0.09540	396.81689	0.0
7	1081.79980	511.29980	10.33000	62.81000	0.09550	400.81689	0.0
7	1087.59985	513.00000	10.27000	62.64000	0.09550	404.81689	0.0
7	1083.50000	512.50000	10.14000	62.46999	0.09620	408.81689	0.0
7	1087.19995	513.19995	10.11000	62.39000	0.09630	412.81689	0.0
7	1090.00000	511.79980	10.01000	62.29999	0.09690	416.81689	0.0
7	1090.69995	510.19995	9.98000	62.28000	0.09720	420.81689	0.0
7	1090.89990	510.89990	9.98000	62.25000	0.09710	424.81689	0.0
7	1092.00000	511.29980	9.95000	62.20999	0.09720	428.81689	0.0
7	1092.69995	511.79980	9.93000	62.18999	0.09740	432.81689	0.0
7	1093.00000	512.29980	9.89000	62.10999	0.09750	436.81689	0.0
7	1093.19995	512.19995	9.86000	62.09000	0.09770	440.81689	0.0
7	1092.89990	512.19995	9.86000	62.14999	0.09790	444.81689	0.0
7	1093.50000	512.09985	9.84000	62.06000	0.09770	448.81689	0.0
7	1092.69995	511.89990	9.87000	62.10999	0.09770	452.81689	0.0
7	1093.39990	512.09985	9.80000	62.04999	0.09820	456.81689	0.0
7	1092.79980	512.00000	9.78000	62.09000	0.09860	460.81689	0.0
7	1093.59985	512.09985	9.76000	62.03000	0.09860	464.81689	0.0
9	1043.39990	549.39990	9.24000	60.92000	0.10040	1733.39990	1.30390
9	1038.89990	547.39990	9.17000	60.70999	0.10050	1737.39990	1.31545
9	1039.79980	548.59985	9.11000	60.59999	0.10080	1741.39990	1.31765
9	1040.39990	548.79980	9.07000	60.50000	0.10090	1745.39990	1.31552
9	1042.19995	550.79980	9.03000	60.43999	0.10120	1749.39990	1.31771
9	1083.29980	552.59985	9.06000	60.78000	0.10200	1753.39990	1.14736
9	1109.89990	569.69995	9.06000	61.06999	0.10290	1757.39990	1.11726
9	1111.69995	569.39990	9.00000	60.96999	0.10330	1761.39990	1.11075
9	1114.39990	570.19995	8.95000	60.89000	0.10350	1765.39990	1.10341
9	1116.89990	570.59985	8.90000	60.81999	0.10390	1769.39990	0.0
9	1078.39990	525.29980	8.80000	60.07999	0.10260	1773.39990	0.0
9	1082.00000	529.69995	8.78000	60.07999	0.10280	1777.39990	0.0
9	1047.89990	493.59985	8.09000	57.67999	0.10270	2265.39966	0.0
9	1037.89990	494.89990	8.05000	57.56000	0.10290	2269.40039	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
9	1035.09985	493.00000	8.04000	57.50999	0.10280	2273.40088	0.0
9	1036.69995	494.00000	8.03000	57.50999	0.10300	2277.40039	0.0
9	1038.29980	496.89990	7.99000	57.53000	0.10350	2281.39990	0.0
9	1040.09985	498.50000	7.99000	57.54999	0.10370	2285.39917	0.0
9	1041.09985	498.79980	7.98000	57.54999	0.10380	2289.39990	0.0
9	1041.69995	498.79980	7.96000	57.54999	0.10410	2293.39941	0.0
9	1043.50000	499.09985	7.95000	57.56999	0.10420	2297.40015	0.0
9	1044.50000	499.39990	7.95000	57.57999	0.10430	2301.40088	0.0
9	1070.69995	515.29980	7.96000	57.95000	0.10540	2305.40039	0.0

AVERAGE VALUES						
10- 78- 29	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	11.83833	67.64493	0.09663	30.93332	6	
233 - 1045	9.98722	62.29211	0.09714	430.81641	18	
1045 - 1885	9.01416	60.65491	0.10207	1755.39868	12	
1885 - 2400	7.99908	57.59444	0.10367	2285.39844	11

Figure 7.7.5-14. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-14. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 27		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
9	1091.79980	521.09985	13.11000	67.62999	0.08720	3.63333	0.0
9	1085.39990	521.89990	13.05000	67.28999	0.08670	18.34999	0.0
9	1084.39990	521.69995	13.04000	67.25000	0.08670	20.93329	0.0
9	1084.59985	522.19995	13.00000	67.15999	0.08670	24.83330	0.0
9	1084.79980	522.09985	12.95000	67.06000	0.08680	28.95000	0.0
9	1085.00000	522.00000	12.90000	66.95999	0.08690	32.96669	0.0
9	1084.69995	521.69995	12.85000	66.87999	0.08700	36.96669	0.0
9	1084.29980	521.19995	12.83000	66.81000	0.08700	40.95000	0.0
9	1085.79980	506.79980	9.81000	61.42000	0.09610	396.81689	0.0
9	1089.39990	508.00000	9.69000	61.20999	0.09670	400.81689	0.0
9	1096.39990	511.09985	9.60000	61.01999	0.09690	404.81689	0.0
9	1089.69995	508.29980	9.47000	60.87999	0.09780	408.81689	0.0
9	1092.50000	508.09985	9.42000	60.78999	0.09810	412.81689	0.0
9	1096.09985	506.19995	9.31000	60.67999	0.09890	416.81689	0.0
9	1098.59985	503.50000	9.26000	60.59000	0.09910	420.81689	0.0
9	1099.50000	503.19995	9.23000	60.53999	0.09920	424.81689	0.0
9	1101.00000	503.19995	9.23000	60.50999	0.09920	428.81689	0.0
9	1102.50000	503.89990	9.19000	60.43999	0.09930	432.81689	0.0
9	1102.50000	504.29980	9.17000	60.43999	0.09960	436.81689	0.0
9	1102.19995	504.00000	9.14000	60.42999	0.09990	440.81689	0.0
9	1102.50000	504.00000	9.15000	60.40999	0.09970	444.81689	0.0
9	1102.19995	503.59985	9.11000	60.42999	0.10030	448.81689	0.0
9	1101.59985	503.39990	9.13000	60.40999	0.09990	452.81689	0.0
9	1101.89990	503.59985	9.12000	60.39000	0.09990	456.81689	0.0
9	1101.59985	503.39990	9.12000	60.39999	0.10000	460.81689	0.0
9	1101.89990	503.50000	9.10000	60.39000	0.10010	464.81689	0.0
11	968.89990	468.00000	8.22000	56.10999	0.09570	1749.39990	1.25426
11	1035.69995	496.89990	8.19000	56.71999	0.09820	1753.39990	0.0
11	1061.00000	518.09985	8.12000	56.87000	0.09950	1757.39990	0.0
11	1062.79980	518.69995	7.98000	56.64999	0.10060	1765.39990	0.0
11	1064.59985	520.00000	7.93000	56.56000	0.10090	1769.39990	0.0
11	1081.29980	519.59985	7.89000	56.60999	0.10150	1773.39990	0.0
11	1083.89990	521.29980	7.84000	56.53999	0.10190	1777.39990	0.0
11	1070.19995	509.09985	7.28000	54.59999	0.10240	2265.39966	0.0
11	1065.89990	511.29980	7.23000	54.50999	0.10280	2273.40088	0.0
11	1069.59985	513.29980	7.23000	54.53999	0.10290	2277.40039	0.0
11	1072.29980	516.50000	7.22000	54.54999	0.10300	2281.39990	0.0
11	1074.79980	517.79980	7.20000	54.56999	0.10340	2285.39917	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
11	1076.59985	518.19995	7.19000	54.56999	0.10350	2289.39990	0.0
11	1077.50000	517.39990	7.18000	54.54999	0.10360	2293.39941	0.0
11	1078.89990	516.50000	7.18000	54.56000	0.10370	2297.40015	0.0
11	1079.89990	516.59985	7.17000	54.56000	0.10380	2301.40088	0.0
11	1080.59985	518.29980	7.15000	54.57999	0.10410	2305.40039	0.0

AVERAGE VALUES						
10-20A- 27	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	12.96624	67.12991	0.08687	25.94791	8	
233 - 1045	9.29166	60.63213	0.09893	430.81641	18	
1045 - 1885	8.02428	56.57993	0.09976	1763.68457	7	
1885 - 2400	7.20299	54.55888	0.10332	2286.99829	10

Figure 7.7.5-15. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-15. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 28		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
11	1075.19995	518.39990	12.16000	67.62000	0.09400	18.34999	0.0
11	1080.59985	521.89990	12.13000	67.50999	0.09390	20.93329	0.0
11	1081.00000	522.39990	12.09000	67.40999	0.09400	24.83330	0.0
11	1080.59985	522.19995	12.04000	67.31000	0.09410	28.95000	0.0
11	1080.59985	522.19995	12.00000	67.18999	0.09410	32.96669	0.0
11	1079.79980	521.89990	11.96000	67.09999	0.09410	36.96669	0.0
11	1079.29980	521.09985	11.92000	67.01999	0.09420	40.95000	0.0
11	1125.39990	529.59985	9.33000	60.90999	0.09970	396.81689	0.0
11	1133.79980	530.29980	9.12000	60.59000	0.10060	400.81689	0.0
11	1143.50000	530.09985	8.96000	60.37000	0.10170	404.81689	0.0
11	1085.09985	497.50000	9.08000	60.34000	0.10030	408.81689	0.0
11	1085.29980	497.39990	9.06000	60.31000	0.10040	412.81689	0.0
11	1085.29980	496.79980	9.02000	60.25999	0.10060	416.81689	0.0
11	1085.29980	495.79980	8.98000	60.21999	0.10100	420.81689	0.0
11	1085.79980	496.69995	9.00000	60.20000	0.10060	424.81689	0.0
11	1086.39990	497.00000	8.98000	60.18999	0.10090	428.81689	0.0
11	1087.00000	497.59985	8.97000	60.17000	0.10100	432.81689	0.0
11	1086.59985	497.79980	8.94000	60.15999	0.10120	436.81689	0.0
11	1087.00000	498.09985	8.93000	60.15999	0.10130	440.81689	0.0
11	1087.59985	498.50000	8.93000	60.15999	0.10130	444.81689	0.0
11	1087.89990	498.29980	8.87000	60.14999	0.10200	448.81689	0.0
11	1087.50000	498.39990	8.88000	60.15999	0.10190	452.81689	0.0
11	1087.69995	498.69995	8.87000	60.15999	0.10200	456.81689	0.0
11	1087.59985	498.59985	8.87000	60.14999	0.10200	460.81689	0.0
11	1087.89990	498.59985	8.87000	60.14000	0.10200	464.81689	0.0
13	1041.09985	555.59985	8.74000	58.07999	0.09650	1733.39990	1.34777
13	1037.69995	556.69995	8.63000	57.81999	0.09690	1737.39990	1.37252
13	1037.79980	557.19995	8.56000	57.64999	0.09710	1741.39990	1.37535
13	1038.39990	557.39990	8.46000	57.48999	0.09760	1745.39990	1.37079
13	1039.09985	557.19995	8.40000	57.37000	0.09800	1749.39990	1.36872
13	1062.50000	542.50000	8.40000	57.39999	0.09810	1753.39990	1.18622
13	1080.59985	541.59985	8.36000	57.39999	0.09850	1757.39990	1.11174
13	1082.79980	543.09985	8.29000	57.29999	0.09900	1761.39990	1.10987
13	1085.00000	544.50000	8.24000	57.20999	0.09930	1765.39990	1.10702
13	1087.69995	546.19995	8.19000	57.14000	0.09970	1769.39990	1.10410
13	1084.59985	529.29980	8.17000	56.90999	0.09910	1773.39990	0.0
13	1087.50000	530.59985	8.11000	56.85999	0.09960	1777.39990	0.0
13	1056.00000	499.09985	5.87000	54.50000	0.12660	2265.39966	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
13	1040.50000	499.59985	6.59000	54.53000	0.11290	2273.40088	0.0
13	1042.39990	501.00000	6.54000	54.50000	0.11350	2277.40039	0.0
13	1043.19995	502.29980	6.84000	54.59999	0.10890	2281.39990	0.0
13	1045.39990	504.00000	6.87000	54.62999	0.10850	2285.39917	0.0
13	1047.19995	505.00000	6.83000	54.59999	0.10910	2289.39990	0.0
13	1048.69995	505.19995	6.89000	54.59999	0.10820	2293.39941	0.0
13	1051.09985	505.29980	6.86000	54.59999	0.10860	2297.40015	0.0
13	1053.69995	506.19995	6.86000	54.59000	0.10860	2301.40088	0.0
13	1071.29980	515.29980	7.01000	54.84000	0.10730	2305.40039	0.0

AVERAGE VALUES						
10-20A- 28	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.04285	67.30849	0.09406	29.13570	7	
233 - 1045	8.98110	60.26659	0.10114	430.81641	18	
1045 - 1885	8.37916	57.38576	0.09828	1755.39868	12	
1885 - 2400	6.71599	54.59889	0.11122	2286.99829	10

Figure 7.7.5-16. TELPS Leg Performance Data Normalized to TH = 1090 (F) TC = 520 (F)

TABLE 7.7.5-16. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 29		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
13	1101.89990	531.29980	12.10000	67.67999	0.09460	3.63333	0.0
13	1086.59985	523.39990	11.95000	67.50000	0.09530	18.34999	0.0
13	1086.39990	523.79980	11.92000	67.45999	0.09550	20.93329	0.0
13	1086.39990	523.69995	11.88000	67.39000	0.09550	24.83330	0.0
13	1086.19995	523.09985	11.83000	67.29999	0.09570	28.95000	0.0
13	1086.19995	523.00000	11.78000	67.20999	0.09590	32.96669	0.0
13	1085.89990	523.09985	11.73000	67.14000	0.09600	36.96669	0.0
13	1085.19995	522.00000	11.69000	67.06999	0.09620	40.95000	0.0
13	1101.89990	506.79980	7.33000	58.65999	0.11740	416.81689	0.0
13	1107.39990	503.69995	7.23000	58.54999	0.11850	420.81689	0.0
13	1112.00000	501.89990	7.04000	58.43999	0.12130	424.81689	0.0
13	1115.59985	500.79980	7.00000	58.31999	0.12140	428.81689	0.0
13	1117.79980	501.00000	6.96000	58.29999	0.12210	432.81689	0.0
13	1118.09985	500.89990	6.87000	58.25999	0.12350	436.81689	0.0
13	1118.39990	501.09985	7.08000	58.42999	0.12050	440.81689	0.0
13	1119.00000	501.39990	7.19000	58.50000	0.11890	444.81689	0.0
13	1119.29980	501.50000	7.26000	58.57999	0.11820	448.81689	0.0
13	1119.00000	501.50000	7.22000	58.56999	0.11880	452.81689	0.0
13	1119.29980	501.79980	7.22000	58.57999	0.11890	456.81689	0.0
13	1119.00000	501.69995	7.18000	58.59999	0.11960	460.81689	0.0
13	1119.29980	501.69995	7.14000	58.60999	0.12030	464.81689	0.0
15	1022.69995	545.39990	8.77000	58.95000	0.09910	1733.39990	1.38796
15	1020.29980	545.79980	8.66000	58.70000	0.09940	1737.39990	1.40197
15	1020.29980	545.69995	8.58000	58.53000	0.09980	1741.39990	1.40169
15	1021.29980	546.89990	8.51000	58.39999	0.10020	1745.39990	1.40336
15	1022.29980	547.39990	8.45000	58.26999	0.10050	1749.39990	1.40167
15	1049.59985	538.79980	8.41000	58.35999	0.10120	1753.39990	1.22370
15	1067.69995	536.29980	8.37000	58.34999	0.10170	1757.39990	1.13886
15	1070.39990	537.59985	8.30000	58.23000	0.10210	1761.39990	1.13319
15	1073.00000	539.09985	8.25000	58.14999	0.10240	1765.39990	1.13024
15	1076.29980	541.59985	8.20000	58.07999	0.10290	1769.39990	1.12829
15	1083.00000	529.29980	8.16000	57.96999	0.10300	1773.39990	0.0
15	1086.79980	531.69995	8.11000	57.92999	0.10340	1777.39990	0.0
19	1060.39990	504.09985	8.18000	55.87999	0.09540	2265.39966	0.0
19	1051.79980	503.09985	8.09000	55.62000	0.09560	2273.40088	0.0
19	1054.39990	505.19995	8.07000	55.62000	0.09580	2277.40039	0.0
19	1056.00000	506.89990	8.04000	55.59999	0.09610	2281.39990	0.0
19	1058.50000	508.39990	8.01000	55.59999	0.09640	2285.39917	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
19	1060.39990	509.39990	8.01000	55.59999	0.09650	2289.39990	0.0
19	1061.69995	509.50000	8.00000	55.59000	0.09660	2293.39941	0.0
19	1063.19995	508.50000	7.99000	55.57999	0.09670	2297.40015	0.0
19	1065.39990	509.39990	7.97000	55.57999	0.09690	2301.40088	0.0
19	1079.79980	517.59985	7.95000	55.75999	0.09780	2305.40039	0.0

AVERAGE VALUES						
10-20A- 29	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	11.85999	67.34366	0.09559	25.94791	8	
233 - 1045	7.13230	58.49220	0.11995	440.81665	13	
1045 - 1885	8.39749	58.32660	0.10131	1755.39868	12	
1885 - 2400	8.03099	55.64288	0.09638	2286.99829	10	

7.7.6 PERFORMANCE TEST DATA

LOT 10 - P-TYPE

$T_H = 1220^{\circ}\text{F}$

$T_C = 520^{\circ}\text{F}$

BATCH	SAMPLE	TOTAL TIME (HR)	FIGURE NUMBER
4B	930	2159	7.7.6-1
	932	2159	7.7.6-2
	939	2155	7.7.6-3
5A	930	2143	7.7.6-4
	931	2159	7.7.6-5
	932	2159	7.7.6-6
6B	30	2139	7.7.6-7
	32	2159	7.7.6-8
	39	2205	7.7.6-9
7B	30	2205	7.7.6-10
	31	2205	7.7.6-11
	32	2205	7.7.6-12
20A	30	2205	7.7.6-13
	32	2184	7.7.6-14
	33	2205	7.7.6-15

Figure 7.7.6-1. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-930		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1236.19995	545.79980	13.59000	83.95999	0.12960	9.76667	0.0
1	1235.89990	547.39990	13.55000	84.01999	0.13030	13.76670	0.0
1	1219.29980	533.89990	13.58000	84.34000	0.13090	18.61670	0.0
1	1218.09985	535.19995	13.56000	84.34999	0.13120	21.93329	0.0
1	1216.89990	535.59985	13.43000	84.39999	0.13260	25.75000	0.0
1	1217.19995	536.69995	13.41000	84.37000	0.13270	29.75000	0.0
1	1216.00000	537.29980	13.39000	84.39000	0.13300	33.75000	0.0
1	1216.89990	537.50000	13.33000	84.37999	0.13360	39.75000	0.0
1	1216.89990	537.50000	13.33000	84.37999	0.13360	39.75000	0.0
1	1169.89990	522.39990	11.79000	77.60999	0.12770	443.76685	0.0
1	1274.59985	573.89990	11.45000	77.48000	0.13110	448.39990	0.0
1	1222.19995	524.59985	11.38000	77.68999	0.13260	452.39990	0.0
1	1216.59985	518.39990	11.41000	77.76999	0.13250	456.39990	0.0
1	1215.79980	518.89990	11.39000	77.78000	0.13280	460.39990	0.0
1	1214.29980	518.19995	11.40000	77.81999	0.13280	464.39990	0.0
1	1217.50000	518.89990	11.43000	77.95000	0.13290	468.46680	0.0
1	1219.00000	523.59985	11.39000	77.95999	0.13340	472.68286	0.0
1	1214.29980	520.19995	11.39000	77.92000	0.13330	476.39990	0.0
1	1214.59985	520.79980	11.41000	77.93999	0.13310	481.73291	0.0
1	1183.29980	568.79980	10.46000	75.39000	0.13590	1609.56982	1.26891
1	1180.59985	530.00000	10.34000	74.89999	0.13560	1613.56982	1.13378
1	1261.09985	617.39990	10.09000	76.35999	0.14450	1625.56982	1.20316
1	1284.29980	613.79980	9.93000	76.46999	0.14720	1629.56982	1.12452
1	1307.39990	606.00000	9.90000	76.71999	0.14870	1633.56982	0.0
1	1309.89990	606.89990	9.88000	76.75000	0.14910	1637.56982	0.0
1	1309.89990	607.09985	9.91000	76.84999	0.14890	1641.56982	0.0
1	1309.59985	607.59985	9.95000	76.87999	0.14860	1645.56982	0.0
1	1309.89990	607.89990	9.99000	76.98999	0.14840	1649.56982	0.0
1	1309.89990	608.29980	10.02000	77.03999	0.14810	1653.56982	0.0
1	1309.09985	608.19995	10.06000	77.09000	0.14770	1657.56982	0.0
1	1309.29980	608.69995	10.08000	77.14000	0.14760	1661.56982	0.0
1	1309.29980	608.79980	10.10000	77.17000	0.14740	1665.56982	0.0
1	1308.19995	608.39990	10.12000	77.20000	0.14730	1669.56982	0.0
1	1309.89990	609.59985	10.16000	77.28000	0.14700	1673.56982	0.0
1	1309.89990	609.89990	10.21000	77.32999	0.14650	1677.56982	0.0
1	1309.29980	609.69995	10.20000	77.34000	0.14650	1681.56982	0.0
1	1309.29980	610.00000	10.23000	77.35999	0.14630	1685.56982	0.0
1	1252.19995	586.00000	9.90000	76.00999	0.14580	1689.56982	1.11810

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1232.09985	561.29980	9.85000	75.46999	0.14460	1693.56982	0.0
1	1232.09985	561.59985	9.88000	75.50999	0.14430	1697.56982	0.0
1	1232.09985	561.39990	9.90000	75.53999	0.14420	1701.56982	0.0
1	1232.09985	561.19995	9.91000	75.51999	0.14380	1705.56982	0.0
1	1232.69995	562.29980	9.93000	75.59000	0.14390	1709.56982	0.0
1	1233.00000	562.50000	9.93000	75.59999	0.14390	1713.56982	0.0
1	1232.09985	562.19995	9.94000	75.60999	0.14380	1717.56982	0.0
1	1232.39990	562.19995	9.96000	75.64999	0.14370	1721.56982	0.0
1	1232.69995	563.00000	9.97000	75.62999	0.14350	1725.56982	0.0
1	1232.39990	562.79980	9.98000	75.64999	0.14340	1728.72998	0.0
1	1114.09985	517.19995	10.30000	73.34999	0.13060	2074.81006	1.30731
1	1107.69995	515.00000	10.16000	73.00999	0.13120	2078.80957	1.32258
1	1117.79980	520.39990	9.98000	72.71999	0.13250	2086.80981	1.30800
1	1180.89990	491.29980	9.63000	72.57999	0.13670	2138.81006	0.0
1	1205.79980	507.89990	9.68000	73.06999	0.13790	2142.80957	0.0
1	1204.89990	506.50000	9.66000	73.00000	0.13790	2146.81006	0.0
1	1203.69995	502.79980	9.63000	72.92999	0.13810	2150.81079	0.0
1	1204.29980	503.89990	9.61000	73.00000	0.13850	2154.81030	0.0
1	1205.19995	504.39990	9.59000	72.96999	0.13880	2158.80981	0.0

AVERAGE VALUES					
10- 4A-930					
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	13.46332	84.28770	0.13194	25.87036	9
233 - 1045	11.44399	77.79192	0.13222	462.50415	10
1045 - 1885	10.02688	76.34608	0.14539	1672.98584	29
1885 - 2400	9.80444	72.95885	0.13580	2125.91968	9

Figure 7.7.6-2. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-2. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-932		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1201.00000	541.69995	9.91000	75.17000	0.14260	443.76685	0.0
3	1229.50000	522.29980	9.46000	75.95999	0.15250	452.39990	0.0
3	1222.79980	513.79980	9.48000	76.03000	0.15240	456.39990	0.0
3	1221.89990	515.39990	9.50000	76.14999	0.15270	460.39990	0.0
3	1220.39990	514.69995	9.52000	76.26999	0.15270	464.39990	0.0
3	1220.69995	515.19995	9.53000	76.35999	0.15300	468.46680	0.0
3	1215.19995	515.59985	9.58000	76.42000	0.15240	472.68286	0.0
3	1210.50000	511.79980	9.61000	76.48000	0.15210	476.39990	0.0
3	1211.89990	512.79980	9.62000	76.53000	0.15230	481.73291	0.0
3	1221.29980	628.09985	12.03000	77.20999	0.12390	1593.56982	1.38436
3	1235.89990	627.50000	10.82000	74.95000	0.12990	1609.56982	1.32822
3	1162.39990	522.50000	10.54000	72.54999	0.12480	1613.56982	1.16201
3	1231.00000	597.00000	10.48000	73.89000	0.13030	1625.56982	1.22004
3	1249.00000	592.00000	10.56000	74.03999	0.12980	1629.56982	1.14766
3	1270.59985	586.89990	10.66000	74.34000	0.12960	1633.56982	0.0
3	1285.19995	590.29980	10.77000	74.75000	0.12970	1637.56982	0.0
3	1292.89990	593.50000	10.78000	75.00000	0.13050	1641.56982	0.0
3	1295.39990	594.79980	10.85000	75.21999	0.13030	1645.56982	0.0
3	1298.00000	595.09985	10.86000	75.39000	0.13090	1649.56982	0.0
3	1299.09985	595.39990	10.80000	75.50000	0.13190	1653.56982	0.0
3	1299.39990	595.69995	10.77000	75.59999	0.13270	1657.56982	0.0
3	1300.29980	596.00000	10.73000	75.68999	0.13350	1661.56982	0.0
3	1300.59985	596.09985	10.69000	75.78000	0.13430	1665.56982	0.0
3	1300.00000	595.69995	10.63000	75.82999	0.13530	1669.56982	0.0
3	1301.69995	596.59985	10.59000	75.95999	0.13630	1673.56982	0.0
3	1302.00000	597.00000	10.57000	76.03000	0.13670	1677.56982	0.0
3	1301.69995	597.09985	10.59000	76.15999	0.13690	1681.56982	0.0
3	1302.00000	597.29980	10.63000	76.25999	0.13680	1685.56982	0.0
3	1248.69995	576.89990	10.42000	75.17000	0.13560	1689.56982	0.0
3	1225.69995	551.09985	10.46000	74.70999	0.13350	1693.56982	0.0
3	1226.00000	551.29980	10.55000	74.75000	0.13240	1697.56982	0.0
3	1226.00000	551.39990	10.60000	74.84999	0.13220	1705.56982	0.0
3	1226.29980	551.69995	10.62000	74.89000	0.13210	1709.56982	0.0
3	1226.29980	551.79980	10.68000	74.93999	0.13150	1713.56982	0.0
3	1225.69995	551.50000	10.66000	74.92999	0.13170	1717.56982	0.0
3	1226.29980	551.89990	10.67000	74.96999	0.13170	1721.56982	0.0
3	1226.59985	553.09985	10.71000	75.00000	0.13140	1725.56982	0.0
3	1226.29980	552.69995	10.72000	75.03000	0.13130	1728.72998	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1123.50000	543.79980	12.33000	74.01999	0.11100	2074.81006	1.38750
3	1116.19995	542.50000	11.95000	73.42000	0.11280	2078.80957	1.41353
3	1121.09985	546.29980	11.69000	72.92999	0.11370	2086.80981	1.41067
3	1174.09985	480.50000	11.97000	71.62999	0.10710	2138.81006	0.0
3	1213.09985	500.79980	12.05000	72.45999	0.10890	2142.80957	0.0
3	1216.59985	500.79980	12.00000	72.50999	0.10950	2146.81006	0.0
3	1218.69995	499.69995	11.98000	72.57999	0.10990	2150.81079	0.0
3	1220.39990	500.39990	12.01000	72.67999	0.10990	2154.81030	0.0
3	1223.09985	501.50000	12.00000	72.75999	0.11030	2158.80981	0.0

AVERAGE VALUES						
10- 4A-932	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
233 - 1045	9.57888	76.15211	0.15141	464.07202	9	
1045 - 1885	10.70481	75.15129	0.13198	1669.26172	29	
1885 - 2400	11.99777	72.77655	0.11034	2125.91968	9

Figure 7.7.6-3. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-3. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-939		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1258.79980	551.09985	12.36000	81.12000	0.13640	5.78333	0.0
5	1255.09985	546.09985	12.45000	82.37999	0.13630	9.76667	0.0
5	1254.79980	547.09985	12.46000	82.39999	0.13620	13.76670	0.0
5	1235.29980	534.50000	12.55000	82.70000	0.13630	18.61670	0.0
5	1235.00000	534.59985	12.54000	82.71999	0.13640	21.93329	0.0
5	1234.19995	533.59985	12.41000	82.70000	0.13780	25.75000	0.0
5	1233.89990	533.50000	12.37000	82.60999	0.13790	29.75000	0.0
5	1232.39990	533.39990	12.35000	82.57999	0.13810	33.75000	0.0
5	1228.89990	532.50000	12.31000	82.56000	0.13840	39.75000	0.0
5	1228.89990	532.50000	12.31000	82.56000	0.13840	39.75000	0.0
5	1232.39990	545.39990	8.87000	73.95000	0.15420	452.39990	0.0
5	1219.29980	532.19995	9.05000	74.26999	0.15230	456.39990	0.0
5	1218.39990	533.39990	9.15000	74.54999	0.15190	460.39990	0.0
5	1217.50000	533.59985	9.22000	74.70000	0.15130	464.39990	0.0
5	1220.19995	530.69995	9.30000	74.57999	0.14960	468.46680	0.0
5	1216.89990	533.59985	9.38000	74.76999	0.14900	472.68286	0.0
5	1213.39990	531.50000	9.42000	74.96999	0.14910	476.39990	0.0
5	1213.69995	532.39990	9.47000	75.14000	0.14910	481.73291	0.0
5	1208.69995	615.19995	9.62000	73.57999	0.14070	1593.56982	1.37402
5	1232.09985	615.39990	8.28000	71.18999	0.15310	1609.56982	1.28981
5	1174.09985	516.50000	8.07000	69.40999	0.14930	1613.56982	1.10757
5	1224.79980	584.19995	8.18000	70.85999	0.15340	1625.56982	1.19099
5	1227.19995	589.39990	8.20000	71.17000	0.15440	1629.56982	1.20343
5	1228.89990	591.79980	8.26000	71.39999	0.15430	1633.56982	1.20736
5	1230.69995	591.00000	8.34000	71.39999	0.15290	1637.56982	1.19828
5	1231.79980	594.89990	8.38000	71.84999	0.15390	1641.56982	1.20896
5	1232.39990	594.19995	8.44000	71.87000	0.15310	1645.56982	1.20551
5	1233.59985	594.79980	8.49000	72.03999	0.15280	1649.56982	1.20315
5	1234.19995	595.39990	8.53000	72.18999	0.15270	1653.56982	1.20426
5	1233.89990	594.79980	8.58000	72.28000	0.15230	1657.56982	1.20300
5	1234.50000	595.69995	8.63000	72.45999	0.15200	1661.56982	1.20444
5	1234.79980	595.50000	8.68000	72.53000	0.15160	1665.56982	1.20222
5	1234.19995	594.50000	8.72000	72.57999	0.15110	1669.56982	1.20111
5	1236.19995	595.09985	8.81000	72.73000	0.15010	1677.56982	1.19602
5	1235.89990	596.39990	8.84000	72.96999	0.15060	1681.56982	1.20192
5	1236.19995	597.09985	8.88000	73.09000	0.15030	1685.56982	1.20336
5	1223.69995	591.50000	8.88000	73.01999	0.15000	1689.56982	1.22249
5	1219.00000	584.89990	8.90000	72.82999	0.14910	1693.56982	1.21220

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1218.69995	585.89990	8.92000	73.00000	0.14930	1697.56982	1.21778
5	1219.00000	585.59985	8.97000	73.00999	0.14860	1701.56982	1.21409
5	1218.69995	584.50000	8.99000	72.96999	0.14810	1705.56982	1.21096
5	1219.29980	587.00000	9.02000	73.18999	0.14850	1709.56982	1.21921
5	1219.29980	585.00000	9.05000	73.06999	0.14760	1713.56982	1.21182
5	1218.69995	582.50000	9.08000	72.90999	0.14640	1717.56982	1.20395
5	1219.00000	584.19995	9.14000	73.15999	0.14650	1725.56982	1.20974
5	1218.69995	583.79980	9.17000	73.25999	0.14640	1728.72998	1.20892
5	1132.29980	568.39990	9.41000	71.64000	0.13640	2074.81006	1.46983
5	1128.69995	564.69995	9.11000	70.78999	0.13760	2078.80957	1.46695
5	1139.89990	565.79980	8.76000	69.71999	0.13870	2086.80981	1.42402
5	1203.39990	543.39990	8.45000	69.35999	0.14240	2138.81006	1.11250
5	1166.59985	486.00000	8.37000	68.12999	0.13860	2142.80957	0.0
5	1166.00000	484.39990	8.38000	68.12999	0.13840	2146.81006	0.0
5	1165.39990	480.69995	8.42000	68.03999	0.13750	2150.81079	0.0
5	1166.00000	483.59985	8.41000	68.25999	0.13850	2154.81030	0.0

AVERAGE VALUES					
10- 4A-939					
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	12.41099	82.43291	0.13722	23.86166	10
233 - 1045	9.23249	74.61618	0.15081	466.61011	8
1045 - 1885	8.71606	72.35881	0.15032	1668.39380	28
1885 - 2400	8.66374	69.25864	0.13851	2121.80859	8

Figure 7.7.6-4. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-4. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-930		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
7	1251.29980	550.59985	13.97000	85.09000	0.12960	5.78333	0.0
7	1245.19995	543.39990	14.05000	85.45000	0.12990	9.76667	0.0
7	1244.29980	544.79980	14.05000	85.54999	0.13020	13.76670	0.0
7	1227.50000	534.89990	14.10000	85.89999	0.13090	18.61670	0.0
7	1227.19995	535.39990	14.06000	85.89999	0.13120	21.93329	0.0
7	1226.59985	535.09985	13.93000	85.67999	0.13180	25.75000	0.0
7	1226.00000	535.50000	13.92000	85.73000	0.13200	29.75000	0.0
7	1224.50000	535.39990	13.90000	85.75000	0.13230	33.75000	0.0
7	1219.29980	534.50000	13.90000	85.79999	0.13240	39.75000	0.0
7	1219.29980	534.50000	13.90000	85.79999	0.13240	39.75000	0.0
7	1166.00000	526.79980	11.84000	80.51999	0.13690	443.76685	0.0
7	1267.69995	577.19995	11.41000	80.20999	0.14090	460.39990	0.0
7	1267.69995	578.29980	11.32000	80.14999	0.14190	464.39990	0.0
7	1246.09985	560.59985	11.31000	80.37999	0.14290	468.46680	0.0
7	1210.50000	524.89990	11.38000	80.53999	0.14250	472.68286	0.0
7	1207.50000	522.89990	11.40000	80.64000	0.14260	476.39990	0.0
7	1208.09985	522.39990	11.39000	80.62999	0.14270	481.73291	0.0
9	1222.79980	636.09985	11.80000	80.85999	0.13850	1593.56982	1.41760
9	1230.39990	615.50000	10.68000	79.35999	0.14740	1609.56982	1.29639
9	1176.69995	523.29980	10.34000	77.68999	0.14600	1613.56982	1.12221
9	1226.29980	584.69995	10.34000	78.56000	0.14920	1625.56982	1.18884
9	1229.19995	589.39990	10.33000	78.59000	0.14950	1629.56982	1.19696
9	1229.50000	588.89990	10.31000	78.60999	0.14990	1633.56982	1.19442
9	1230.39990	589.39990	10.33000	78.64000	0.14960	1637.56982	1.19298
9	1231.00000	590.09985	10.34000	78.65999	0.14960	1641.56982	1.19393
9	1231.00000	590.19995	10.34000	78.65999	0.14960	1645.56982	1.19489
9	1231.50000	590.29980	10.36000	78.71999	0.14950	1649.56982	1.19314
9	1231.79980	590.79980	10.38000	78.75000	0.14940	1653.56982	1.19424
9	1231.50000	590.79980	10.39000	78.75000	0.14920	1657.56982	1.19456
9	1231.79980	591.09985	10.39000	78.76999	0.14930	1661.56982	1.19536
9	1231.79980	591.00000	10.41000	78.78999	0.14910	1665.56982	1.19471
9	1231.29980	591.29980	10.42000	78.81999	0.14900	1669.56982	1.19775
9	1232.39990	591.79980	10.45000	78.84999	0.14880	1673.56982	1.19614
9	1232.39990	592.00000	10.46000	78.87999	0.14870	1677.56982	1.19630
9	1232.09985	591.89990	10.45000	78.87999	0.14880	1681.56982	1.19710
9	1232.09985	592.19995	10.48000	78.90999	0.14860	1685.56982	1.19839
9	1217.79980	586.29980	10.42000	78.65999	0.14850	1689.56982	1.22122
9	1212.50000	580.00000	10.39000	78.54999	0.14850	1693.56982	1.21423
/							
9	1212.50000	580.00000	10.39000	78.54999	0.14850	1697.56982	1.21423
9	1212.79980	579.79980	10.40000	78.56000	0.14840	1701.56982	1.21242
9	1212.50000	579.59985	10.42000	78.56000	0.14810	1705.56982	1.21195
9	1212.50000	579.79980	10.43000	78.59999	0.14810	1709.56982	1.21393
9	1212.50000	579.59985	10.43000	78.59999	0.14800	1713.56982	1.21212
9	1211.59985	578.89990	10.43000	78.59999	0.14800	1717.56982	1.21212
9	1212.19995	579.19995	10.44000	78.59000	0.14790	1721.56982	1.21230
9	1212.19995	579.50000	10.44000	78.59999	0.14790	1725.56982	1.21329
9	1212.19995	579.29980	10.44000	78.60999	0.14800	1728.72998	1.21311
9	1121.09985	548.19995	10.82000	76.95000	0.13680	2074.81006	1.41909
9	1115.89990	546.29980	10.70000	76.67999	0.13740	2078.80957	1.43274
9	1122.59985	549.79980	10.54000	76.45999	0.13870	2086.80981	1.42111
9	1186.19995	510.69995	10.04000	76.01999	0.14390	2138.81006	0.0
9	1202.79980	521.00000	10.08000	76.32999	0.14450	2142.80957	0.0

AVERAGE VALUES

10- 5A-930	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)	
(HRS)					
0 - 233	13.97799	85.66589	0.13127	23.86166	10
233 - 1045	11.43571	80.43848	0.14149	466.83545	7
1045 - 1885	10.45431	78.74088	0.14832	1670.33862	30
1885 - 2400	10.43599	76.48793	0.14026	2104.40845	5

Figure 7.7.6-5. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-5. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-931		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
9	1271.19995	561.39990	13.74000	84.06000	0.12850	5.78333	0.0
9	1262.59985	551.09985	13.74000	84.50000	0.12990	9.76667	0.0
9	1262.00000	553.69995	13.72000	84.48999	0.13010	13.76670	0.0
9	1237.39990	537.19995	13.74000	85.00000	0.13140	18.61670	0.0
9	1238.00000	540.79980	13.74000	84.93999	0.13120	21.93329	0.0
9	1238.50000	541.89990	13.60000	84.93999	0.13260	25.75000	0.0
9	1238.79980	543.09985	13.60000	84.89999	0.13250	29.75000	0.0
9	1237.69995	543.69995	13.60000	84.90999	0.13250	33.75000	0.0
9	1228.59985	541.00000	13.59000	84.95999	0.13280	39.75000	0.0
9	1228.59985	541.00000	13.59000	84.95999	0.13280	39.75000	0.0
9	1210.19995	580.89990	10.46000	77.53000	0.14370	443.76685	0.0
9	1265.69995	582.19995	10.32000	77.62999	0.14590	448.39990	0.0
9	1224.19995	551.39990	10.41000	77.90999	0.14570	452.39990	0.0
9	1215.79980	541.69995	10.46000	78.06999	0.14560	456.39990	0.0
9	1219.59985	544.19995	10.48000	78.18999	0.14580	460.39990	0.0
9	1219.89990	544.09985	10.51000	78.26999	0.14580	464.39990	0.0
9	1219.89990	545.09985	10.54000	78.34999	0.14560	468.46680	0.0
9	1214.00000	544.39990	10.58000	78.45000	0.14540	472.68286	0.0
9	1210.50000	541.69995	10.61000	78.53000	0.14530	476.39990	0.0
9	1210.50000	541.50000	10.64000	78.59000	0.14520	481.73291	0.0
11	1231.00000	585.69995	9.21000	73.73999	0.14760	1609.56982	1.17797
11	1222.79980	562.00000	9.02000	73.09000	0.14810	1613.56982	1.11943
11	1225.09985	546.29980	8.73000	72.50999	0.15060	1625.56982	0.0
11	1226.29980	549.29980	8.71000	72.57999	0.15120	1629.56982	0.0
11	1226.89990	550.69995	8.70000	72.62000	0.15160	1633.56982	0.0
11	1227.79980	551.69995	8.71000	72.64999	0.15150	1637.56982	0.0
11	1228.00000	552.79980	8.73000	72.70999	0.15130	1641.56982	0.0
11	1226.59985	553.39990	8.75000	72.71999	0.15100	1645.56982	0.0
11	1227.50000	553.29980	8.76000	72.68999	0.15070	1649.56982	0.0
11	1227.50000	554.39990	8.80000	72.75999	0.15040	1653.56982	0.0
11	1226.89990	554.29980	8.81000	72.81000	0.15040	1657.56982	0.0
11	1227.19995	555.29980	8.85000	72.85999	0.15000	1661.56982	0.0
11	1226.89990	555.19995	8.87000	72.87999	0.14960	1665.56982	0.0
11	1225.39990	554.00000	8.90000	72.89000	0.14930	1669.56982	0.0
11	1227.19995	555.50000	8.94000	72.93999	0.14880	1673.56982	0.0
11	1227.19995	556.09985	8.96000	73.01999	0.14880	1677.56982	0.0
11	1226.59985	556.50000	8.98000	73.09000	0.14860	1681.56982	0.0
11	1226.59985	557.29980	9.01000	73.18999	0.14860	1685.56982	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
11	1212.19995	550.29980	8.99000	72.96999	0.14810	1689.56982	1.11103
11	1207.79980	545.29980	9.01000	72.90999	0.14750	1693.56982	1.10453
11	1207.19995	545.69995	9.04000	72.95999	0.14730	1697.56982	1.10919
11	1208.09985	546.29980	9.08000	73.00999	0.14680	1701.56982	1.10876
11	1207.50000	546.79980	9.09000	73.10999	0.14700	1705.56982	1.11195
11	1208.09985	546.59985	9.13000	73.12999	0.14650	1709.56982	1.10985
11	1210.50000	547.50000	9.14000	73.20000	0.14650	1713.56982	1.10566
11	1211.29980	548.59985	9.17000	73.28999	0.14640	1717.56982	1.10741
11	1208.09985	547.79980	9.19000	73.29999	0.14610	1721.56982	1.11357
11	1208.69995	548.19995	9.22000	73.37999	0.14600	1725.56982	1.11365
11	1208.69995	548.59985	9.24000	73.45000	0.14600	1728.72998	1.11536
11	1141.69995	517.79980	9.88000	72.84000	0.13430	2074.81006	1.21100
11	1145.00000	520.29980	9.73000	72.59000	0.13540	2078.80957	1.20893
11	1157.89990	521.89990	9.51000	72.28000	0.13740	2086.80981	1.17336
11	1213.09985	545.69995	9.30000	72.42999	0.14110	2138.81006	0.0
11	1196.00000	505.89990	9.20000	71.89000	0.14050	2142.80957	0.0
11	1197.79980	505.50000	9.19000	71.95000	0.14090	2146.81006	0.0
11	1197.50000	504.29980	9.19000	72.00999	0.14100	2150.81079	0.0
11	1198.09985	505.79980	9.20000	72.06000	0.14110	2154.81030	0.0
11	1196.89990	506.09985	9.18000	72.06000	0.14130	2158.80981	0.0

AVERAGE VALUES						
10- 5A-931	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	13.66599	84.76593	0.13143	23.86166	10	
233 - 1045	10.50099	78.15190	0.14540	462.50415	10	
1045 - 1885	8.95654	72.98126	0.14870	1672.98584	29	
1885 - 2400	9.37555	72.23434	0.13922	2125.91968	9

Figure 7.7.6-6. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-6. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-932		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
11	1226.89990	531.59985	14.34000	85.65999	0.12800	5.78333	0.0
11	1223.39990	527.69995	14.37000	85.89999	0.12840	9.76667	0.0
11	1223.09985	528.59985	14.35000	85.98999	0.12880	13.76670	0.0
11	1211.59985	521.69995	14.36000	86.15999	0.12930	18.61670	0.0
11	1212.19995	523.69995	14.34000	86.14000	0.12940	21.93329	0.0
11	1210.79980	522.89990	14.19000	86.14999	0.13080	25.75000	0.0
11	1211.59985	523.50000	14.15000	86.12000	0.13100	29.75000	0.0
11	1211.09985	524.09985	14.13000	86.12999	0.13120	33.75000	0.0
11	1211.09985	525.19995	14.09000	86.09999	0.13150	39.75000	0.0
11	1211.09985	525.19995	14.09000	86.09999	0.13150	39.75000	0.0
11	1256.19995	567.39990	12.13000	81.57999	0.13710	460.39990	0.0
11	1215.19995	537.09985	12.01000	81.60999	0.13870	472.68286	0.0
11	1214.59985	535.79980	12.00000	81.51999	0.13840	476.39990	0.0
11	1187.09985	505.19995	12.01000	81.54999	0.13840	481.73291	0.0
13	1255.89990	587.89990	11.43000	79.40999	0.13800	1609.56982	1.11470
13	1221.00000	541.50000	11.04000	78.42999	0.13930	1613.56982	0.0
13	1220.19995	535.39990	10.64000	78.14000	0.14350	1625.56982	0.0
13	1221.89990	539.69995	10.56000	78.09999	0.14430	1629.56982	0.0
13	1222.19995	540.29980	10.55000	78.06999	0.14440	1633.56982	0.0
13	1222.79980	540.29980	10.51000	78.03000	0.14480	1637.56982	0.0
13	1223.09985	540.29980	10.50000	78.00000	0.14480	1641.56982	0.0
13	1223.09985	541.19995	10.49000	78.00999	0.14510	1645.56982	0.0
13	1224.00000	541.00000	10.48000	78.00999	0.14520	1649.56982	0.0
13	1224.19995	541.50000	10.45000	78.00000	0.14560	1653.56982	0.0
13	1224.00000	541.50000	10.45000	77.98000	0.14550	1657.56982	0.0
13	1224.19995	542.09985	10.43000	77.98000	0.14570	1661.56982	0.0
13	1224.19995	541.89990	10.42000	77.98000	0.14590	1665.56982	0.0
13	1223.69995	541.00000	10.39000	77.93999	0.14620	1669.56982	0.0
13	1224.79980	542.00000	10.40000	77.98000	0.14620	1673.56982	0.0
13	1225.09985	542.29980	10.25000	77.87999	0.14790	1677.56982	0.0
13	1224.79980	542.59985	10.26000	77.89000	0.14790	1681.56982	0.0
13	1217.50000	539.59985	9.66000	77.37999	0.15500	1689.56982	0.0
13	1215.19995	536.69995	9.65000	77.37999	0.15510	1693.56982	0.0
13	1215.19995	536.79980	9.69000	77.40999	0.15460	1697.56982	0.0
13	1215.50000	536.79980	9.68000	77.39000	0.15470	1701.56982	0.0
13	1215.19995	536.39990	9.02000	77.00999	0.16430	1709.56982	0.0
13	1215.19995	536.39990	8.96000	76.98999	0.16540	1713.56982	0.0
13	1214.29980	535.89990	8.87000	76.95000	0.16680	1717.56982	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
13	1214.89990	536.19995	8.84000	76.92000	0.16740	1721.56982	0.0
13	1215.19995	537.00000	8.85000	76.92000	0.16710	1725.56982	0.0
13	1214.89990	536.89990	9.64000	77.37999	0.15530	1728.72998	0.0
13	1209.29980	539.50000	8.19000	69.84999	0.14890	1741.56982	0.0
13	1212.79980	540.09985	8.19000	70.00000	0.14970	1745.56982	0.0
13	1214.00000	541.19995	8.23000	70.12999	0.14940	1749.56982	0.0
13	1215.79980	542.09985	8.23000	70.25000	0.14990	1753.56982	0.0
13	1215.19995	542.09985	8.27000	70.31999	0.14950	1757.56982	0.0
13	1217.50000	543.69995	8.32000	70.43999	0.14910	1761.56982	0.0
13	1217.50000	543.09985	8.36000	70.50000	0.14870	1765.56982	0.0
13	1217.50000	543.00000	8.39000	70.56999	0.14840	1769.56982	0.0
13	1217.50000	543.39990	8.43000	70.64000	0.14800	1773.56982	0.0
13	1216.29980	543.29980	8.42000	70.67000	0.14830	1777.56982	0.0
13	1216.00000	543.69995	8.50000	70.81000	0.14740	1785.12988	0.0
13	1129.29980	522.19995	9.21000	75.62999	0.15530	2074.81006	1.27087
13	1125.69995	522.00000	9.22000	75.50000	0.15450	2078.80957	1.28429
13	1141.09985	528.09985	8.85000	75.35999	0.16040	2086.80981	1.25313
13	1217.50000	543.50000	10.34000	76.89000	0.14300	2138.81006	0.0
13	1210.50000	537.09985	10.24000	76.76999	0.14390	2142.80957	0.0
13	1213.09985	538.79980	10.25000	76.84000	0.14400	2146.81006	0.0
13	1213.39990	538.39990	10.23000	76.82999	0.14430	2150.81079	0.0
13	1213.39990	538.39990	10.20000	76.84000	0.14470	2154.81030	0.0
13	1211.09985	536.69995	10.15000	76.76999	0.14520	2158.80981	0.0

AVERAGE VALUES

	10- 5A-932					
	TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
	(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
7-188	0 - 233	14.24099	86.04489	0.12999	23.86166	10
	233 - 1045	12.03749	81.56494	0.13815	472.80371	4
	1045 - 1885	9.56944	75.62463	0.15009	1697.53296	38
	1885 - 2400	9.85444	76.38098	0.14837	2125.91968	9

Figure 7.7.6-7. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-7. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 6B- 30		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
13	1238.00000	532.59985	13.84000	84.06000	0.12760	5.78333	0.0
13	1233.29980	527.89990	13.76000	84.25999	0.12900	9.76667	0.0
13	1232.69995	528.29980	13.65000	84.31999	0.13020	13.76670	0.0
13	1221.59985	522.50000	13.57000	84.46999	0.13140	18.61670	0.0
13	1222.19995	524.09985	13.49000	84.39000	0.13200	21.93329	0.0
13	1221.59985	523.50000	13.33000	84.29999	0.13330	25.75000	0.0
13	1222.50000	524.39990	13.28000	84.21999	0.13350	29.75000	0.0
13	1222.19995	524.79980	13.25000	84.17999	0.13380	33.75000	0.0
13	1218.39990	524.29980	13.17000	84.15999	0.13450	39.75000	0.0
13	1218.39990	524.29980	13.17000	84.15999	0.13450	39.75000	0.0
13	1187.39990	544.00000	11.04000	77.70000	0.13680	443.76685	0.0
13	1283.79980	560.69995	10.54000	77.65999	0.14310	448.39990	0.0
13	1241.39990	536.09985	10.57000	77.87999	0.14340	452.39990	0.0
13	1228.29980	521.89990	10.61000	77.93999	0.14310	456.39990	0.0
13	1221.29980	518.59985	10.62000	77.98999	0.14310	460.39990	0.0
13	1221.59985	518.69995	10.63000	78.04999	0.14320	464.39990	0.0
13	1221.89990	519.79980	10.66000	78.15999	0.14320	468.46680	0.0
13	1211.29980	517.50000	10.69000	78.20000	0.14300	472.68286	0.0
13	1204.89990	511.59985	10.72000	78.20000	0.14260	476.39990	0.0
13	1204.59985	511.19995	10.74000	78.25000	0.14250	481.73291	0.0
19	1142.89990	546.29980	9.61000	74.28999	0.14350	2054.81030	1.32258
19	1143.19995	546.00000	9.48000	74.01999	0.14440	2058.80981	1.31993
19	1157.29980	551.39990	9.33000	73.89000	0.14630	2066.81006	1.29012
19	1180.29980	502.39990	9.25000	73.39999	0.14570	2118.81030	0.0
19	1202.50000	516.19995	9.34000	73.87000	0.14610	2122.81104	0.0
19	1202.50000	516.09985	9.37000	73.89000	0.14570	2126.81055	0.0
19	1201.89990	514.59985	9.37000	73.87000	0.14560	2130.80981	0.0
19	1202.50000	515.39990	9.39000	73.84999	0.14530	2134.81055	0.0
19	1202.50000	515.50000	9.39000	73.87999	0.14540	2138.81006	0.0

AVERAGE VALUES

10- 68- 30	RESISTANCE		SEEBECK VOLTAGE		POWER		TIME		NO. OF DATA
TIME RANGE (HRS)	(M OHM)		(MV)		(WATT)		(HRS)		
0 - 233	13.45099		84.25192		0.13198		23.86166		10
233 - 1045	10.68199		78.00294		0.14240		462.50415		10
1885 - 2400	9.39222		73.88435		0.14533		2105.91968		9

Figure 7.7.6-8. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-8. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 68- 32		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
15	1264.00000	558.50000	13.56000	84.06999	0.13030	5.78333	0.0
15	1259.09985	554.79980	13.54000	84.37999	0.13150	9.76667	0.0
15	1259.09985	556.00000	13.48000	84.42000	0.13210	13.76670	0.0
15	1232.39990	541.19995	13.59000	84.89000	0.13260	18.61670	0.0
15	1232.39990	542.69995	13.57000	84.90999	0.13280	21.93329	0.0
15	1231.50000	542.09985	13.44000	84.93999	0.13420	25.75000	0.0
15	1232.09985	542.79980	13.38000	84.92999	0.13480	29.75000	0.0
15	1231.50000	543.29980	13.35000	84.93999	0.13510	33.75000	0.0
15	1225.09985	541.79980	13.32000	84.98999	0.13560	39.75000	0.0
15	1225.09985	541.79980	13.32000	84.98999	0.13560	39.75000	0.0
15	1197.79980	545.89990	11.28000	79.17999	0.13900	443.76685	0.0
15	1252.19995	545.59985	11.14000	79.09999	0.14040	448.39990	0.0
15	1221.89990	529.69995	11.18000	79.09000	0.13980	452.39990	0.0
15	1217.19995	524.39990	11.15000	79.07999	0.14030	456.39990	0.0
15	1215.79980	523.79980	11.15000	79.06999	0.14020	460.39990	0.0
15	1216.29980	524.29980	11.12000	79.09999	0.14060	464.39990	0.0
15	1219.29980	526.00000	11.11000	79.14999	0.14100	468.46680	0.0
15	1218.09985	526.50000	11.11000	79.17000	0.14100	472.68286	0.0
15	1215.19995	523.89990	11.11000	79.23999	0.14130	476.39990	0.0
15	1215.50000	523.59985	11.10000	79.32999	0.14170	481.73291	0.0
19	1230.39990	614.09985	11.16000	78.03000	0.13650	1593.56982	1.29017
19	1239.69995	589.39990	9.90000	73.21999	0.13540	1609.56982	1.16523
19	1223.39990	565.69995	9.42000	72.98000	0.14130	1613.56982	1.13040
19	1215.79980	555.69995	9.38000	73.20999	0.14280	1625.56982	1.11825
19	1216.29980	559.00000	9.46000	73.12999	0.14130	1629.56982	1.12769
19	1216.00000	559.59985	9.40000	73.17999	0.14250	1633.56982	1.13095
19	1216.29980	560.00000	9.49000	72.84000	0.13970	1637.56982	1.13117
19	1216.29980	560.50000	9.46000	73.14999	0.14140	1641.56982	1.13301
19	1215.79980	560.69995	9.48000	73.31000	0.14170	1645.56982	1.13542
19	1216.00000	561.00000	9.51000	73.35999	0.14140	1649.56982	1.13483
19	1216.00000	561.29980	9.58000	73.56999	0.14120	1653.56982	1.13688
19	1215.19995	561.19995	9.56000	73.59000	0.14160	1657.56982	1.13918
19	1215.19995	561.50000	9.52000	73.67000	0.14250	1661.56982	1.14000
19	1215.19995	561.69995	9.57000	73.59000	0.14150	1665.56982	1.14021
19	1214.29980	561.50000	9.56000	73.57999	0.14160	1669.56982	1.14286
19	1215.50000	562.09985	9.58000	73.67000	0.14160	1673.56982	1.14102
19	1215.50000	562.50000	9.57000	73.70999	0.14200	1677.56982	1.14240
19	1214.59985	561.89990	9.58000	73.75999	0.14200	1681.56982	1.14240

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
19	1214.89990	562.50000	9.59000	74.06000	0.14300	1685.56982	1.14400
19	1214.59985	562.19995	9.42000	73.89999	0.14490	1689.56982	1.14455
19	1214.00000	561.89990	9.55000	73.62999	0.14200	1693.56982	1.14424
19	1214.00000	562.00000	9.60000	73.75999	0.14160	1697.56982	1.14470
19	1214.00000	562.29980	9.62000	73.90999	0.14200	1701.56982	1.14609
19	1213.69995	561.89990	9.63000	73.87999	0.14170	1705.56982	1.14551
19	1214.00000	563.39990	9.64000	74.06000	0.14220	1709.56982	1.14956
19	1213.69995	563.39990	9.60000	73.95000	0.14240	1713.56982	1.15024
19	1212.79980	562.79980	9.59000	73.85999	0.14220	1717.56982	1.15142
19	1213.09985	563.19995	9.63000	73.96999	0.14200	1721.56982	1.15166
19	1213.09985	563.79980	9.64000	74.35999	0.14340	1725.56982	1.15366
19	1212.50000	563.19995	9.63000	74.06000	0.14230	1728.72998	1.15316
21	1145.00000	512.79980	10.90000	71.89999	0.11860	2074.81006	1.18245
21	1155.19995	518.19995	10.94000	71.26999	0.11610	2078.80957	1.16918
21	1165.09985	519.00000	11.01000	70.85999	0.11400	2086.80981	1.14114
21	1190.69995	480.19995	11.04000	69.40999	0.10910	2138.81006	0.0
21	1227.19995	516.29980	11.12000	70.50999	0.11180	2142.80957	0.0
21	1227.79980	516.19995	11.10000	70.28999	0.11120	2146.81006	0.0
21	1228.89990	516.19995	11.14000	70.42000	0.11130	2150.81079	0.0
21	1227.50000	515.79980	11.25000	70.21999	0.10960	2154.81030	0.0
21	1227.50000	517.39990	11.24000	70.26999	0.10980	2158.80981	0.0

AVERAGE VALUES						
10- 68- 32	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	13.45499	84.74594	0.13346	23.86166	10	
233 - 1045	11.14499	79.15092	0.14053	462.50415	10	
1045 - 1885	9.61064	73.76488	0.14159	1670.33862	30	
1885 - 2400	11.08222	70.57213	0.11239	2125.91968	9	

7-16777

Figure 7.7.6-9. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-9. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 68- 39		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1160.00000	459.39990	13.84000	85.14000	0.13090	1.50000	0.0
1	1219.29980	533.69995	13.04000	84.09999	0.13570	11.50000	0.0
1	1219.59985	531.19995	12.90000	84.23000	0.13750	19.50000	0.0
1	1213.39990	527.29980	12.93000	84.43999	0.13790	23.50000	0.0
1	1211.89990	527.00000	12.93000	84.45000	0.13790	27.50000	0.0
1	1211.89990	527.29980	12.92000	84.45000	0.13800	31.50000	0.0
1	1211.09985	527.29980	12.91000	84.45999	0.13820	35.50000	0.0
1	1211.29980	527.89990	12.90000	84.45000	0.13820	39.50000	0.0
1	1211.59985	528.59985	12.88000	84.42999	0.13830	43.50000	0.0
1	1211.59985	529.19995	12.87000	84.40999	0.13840	47.50000	0.0
1	1211.09985	528.89990	12.84000	84.39999	0.13870	51.50000	0.0
1	1211.09985	529.50000	12.83000	84.39000	0.13880	55.50000	0.0
1	1211.09985	529.89990	12.81000	84.37999	0.13890	59.50000	0.0
1	1221.00000	527.00000	7.86000	69.07999	0.13190	452.86694	0.0
1	1226.89990	532.79980	8.12000	69.37000	0.14810	456.86694	0.0
1	1225.69995	531.09985	8.30000	69.64000	0.14610	460.86694	0.0
1	1225.39990	531.09985	8.41000	69.84999	0.14500	464.86694	0.0
1	1224.19995	528.29980	8.53000	70.01999	0.14370	468.86694	0.0
1	1221.89990	522.39990	8.67000	70.28000	0.14240	472.86694	0.0
1	1222.50000	524.89990	8.69000	70.34000	0.14240	476.86694	0.0
1	1221.29980	524.19995	8.74000	70.45999	0.14200	480.86694	0.0
1	1221.29980	523.89990	8.79000	70.59000	0.14170	484.86694	0.0
1	1220.69995	523.89990	8.84000	70.70999	0.14150	488.86694	0.0
1	1221.00000	523.89990	8.86000	70.76999	0.14130	492.13281	0.0
1	1230.09985	561.79980	8.57000	69.56000	0.14120	1763.12988	0.0
1	1229.50000	561.09985	8.62000	69.73000	0.14100	1767.12988	0.0
1	1230.39990	562.29980	8.68000	69.90999	0.14070	1771.12988	1.10008
1	1230.09985	562.00000	8.73000	70.04999	0.14040	1775.12988	0.0
1	1229.79980	562.89990	8.83000	70.20000	0.13960	1783.12988	1.10356
1	1228.59985	561.39990	8.87000	70.21999	0.13900	1787.12988	1.10143
1	1228.29980	560.59985	8.91000	70.25000	0.13840	1791.12988	1.10016
1	1228.59985	561.89990	8.95000	70.31000	0.13800	1795.12988	1.10312
1	1229.19995	562.39990	8.99000	70.35999	0.13760	1799.12988	1.10345
1	1229.19995	562.89990	9.04000	70.42999	0.13710	1803.12988	1.10475
1	1221.59985	558.79980	9.02000	70.31999	0.13710	1806.69995	1.11192
1	1121.09985	440.29980	8.62000	66.50000	0.12830	2169.12012	0.0
1	1128.39990	443.19995	8.59000	66.70999	0.12950	2173.12085	0.0
1	1145.00000	449.50000	8.58000	67.03000	0.13100	2177.12036	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1159.69995	452.19995	8.54000	67.23999	0.13240	2181.11987	0.0
1	1229.19995	487.29980	8.63000	68.54999	0.13620	2185.12036	0.89842
1	1230.09985	487.00000	8.61000	68.59000	0.13660	2189.11987	0.89632
1	1230.39990	486.00000	8.63000	68.65999	0.13660	2193.12061	0.89339
1	1229.79980	486.39990	8.66000	68.73999	0.13640	2197.12012	0.89501
1	1230.69995	487.00000	8.68000	68.84000	0.13650	2201.12085	0.89508
1	1230.69995	487.79980	8.69000	68.92000	0.13660	2205.12012	0.89632

AVERAGE VALUES						
10- 68- 39						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.96922	84.44070	0.13749	34.42307	13	
233 - 1045	8.52818	70.10080	0.14419	472.79956	11	
1045 - 1885	8.83727	70.12173	0.13910	1785.63525	11	
1885 - 2400	8.62299	67.97792	0.13401	2187.11743	10

Figure 7.7.6-10. TELPS Leg Performance Data Normalized to $T_H = 1220$ (F) $T_C = 520$ (F)
10-7 B-30

TABLE 7.7.6-10. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 78- 30		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1172.00000	542.09985	13.17000	82.39000	0.12880	43.50000	0.0
3	1187.39990	540.79980	12.99000	82.32999	0.13050	47.50000	0.0
3	1196.59985	538.59985	12.85000	82.34999	0.13200	51.50000	0.0
3	1200.50000	537.29980	12.74000	82.34000	0.13310	55.50000	0.0
3	1201.89990	537.00000	12.64000	82.28999	0.13400	59.50000	0.0
3	1205.19995	547.00000	10.52000	70.54999	0.11830	1763.12988	1.11921
3	1212.79980	547.50000	10.57000	70.75000	0.11840	1767.12988	0.0
3	1215.19995	547.79980	10.48000	70.89000	0.11990	1771.12988	0.0
3	1216.00000	548.19995	10.26000	70.98000	0.12280	1775.12988	0.0
3	1216.29980	548.39990	10.15000	71.06000	0.12440	1779.12988	0.0
3	1216.00000	548.59985	10.11000	71.17000	0.12520	1783.12988	0.0
3	1216.00000	547.89990	10.09000	71.25000	0.12580	1787.12988	0.0
3	1216.29980	547.39990	10.10000	71.34000	0.12600	1791.12988	0.0
3	1216.59985	547.89990	10.14000	71.45000	0.12590	1795.12988	0.0
3	1217.79980	549.00000	10.18000	71.56999	0.12580	1799.12988	0.0
3	1217.79980	549.50000	10.17000	71.62000	0.12610	1803.12988	0.0
3	1217.19995	549.00000	10.17000	71.67999	0.12630	1806.69995	0.0
3	1120.19995	450.59985	11.39000	68.40999	0.10270	2169.12012	0.0
3	1118.69995	450.39990	11.63000	68.57999	0.10110	2173.12085	0.0
3	1127.50000	454.19995	11.88000	68.79999	0.09960	2177.12036	0.0
3	1139.00000	460.50000	12.03000	69.03999	0.09900	2181.11987	0.0
3	1275.50000	522.69995	11.28000	71.26999	0.11260	2185.12036	0.89223
3	1318.39990	554.19995	10.70000	72.09000	0.12140	2189.11987	0.88743
3	1320.89990	553.09985	10.18000	71.90999	0.12710	2193.12061	0.88080
3	1321.69995	553.89990	9.78000	71.85999	0.13200	2197.12012	0.88117
3	1323.09985	554.79980	9.58000	71.92000	0.13500	2201.12085	0.88120
3	1323.39990	555.79980	9.43000	72.00999	0.13750	2205.12012	0.88254

AVERAGE VALUES

10- 78- 30						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	12.87799	82.33994	0.13168	51.50000	5	
1045 - 1885	10.24500	71.19241	0.12374	1785.09302	12	
1885 - 2400	10.78799	70.58888	0.11680	2187.11743	10

Figure 7.7.6-11. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)
10-7 B-31

TABLE 7.7.6-11. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 7B- 31		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1160.89990	450.50000	13.59000	83.73999	0.12900	1.50000	0.0
5	1220.19995	526.89990	13.02000	82.96999	0.13220	11.50000	0.0
5	1214.29980	525.59985	13.06000	83.03999	0.13190	19.50000	0.0
5	1215.19995	522.39990	13.04000	83.09999	0.13240	23.50000	0.0
5	1214.00000	522.39990	13.06000	83.14000	0.13230	27.50000	0.0
5	1214.29980	523.09985	13.08000	83.17000	0.13230	31.50000	0.0
5	1213.69995	522.79980	13.07000	83.17999	0.13230	35.50000	0.0
5	1213.69995	523.09985	13.06000	83.23000	0.13250	39.50000	0.0
5	1214.00000	524.09985	13.05000	83.25000	0.13270	43.50000	0.0
5	1214.00000	524.39990	13.05000	83.23000	0.13270	47.50000	0.0
5	1213.09985	523.69995	13.05000	83.26999	0.13290	51.50000	0.0
5	1213.39990	524.09985	13.04000	83.23999	0.13290	55.50000	0.0
5	1213.39990	524.09985	13.03000	83.23000	0.13290	59.50000	0.0
5	1237.69995	542.89990	8.38000	72.34000	0.15610	452.86694	0.0
5	1243.19995	545.19995	8.52000	72.50000	0.15420	456.86694	0.0
5	1242.29980	543.89990	8.62000	72.67000	0.15310	460.86694	0.0
5	1242.00000	543.50000	8.70000	72.89000	0.15270	464.86694	0.0
5	1215.19995	534.69995	8.90000	73.10999	0.15010	468.86694	0.0
5	1208.39990	524.00000	8.98000	73.20999	0.14910	472.86694	0.0
5	1218.69995	532.39990	8.99000	73.39000	0.14980	476.86694	0.0
5	1217.79980	533.09985	9.02000	73.62999	0.15030	480.86694	0.0
5	1217.79980	530.29980	9.07000	73.56000	0.14910	484.86694	0.0
5	1217.79980	530.29980	9.10000	73.64999	0.14900	488.86694	0.0
5	1218.09985	530.29980	9.15000	73.75999	0.14870	492.13281	0.0
5	1211.09985	581.89990	8.73000	72.37999	0.15000	1763.12988	1.22649
5	1218.69995	584.69995	8.70000	72.48999	0.15100	1767.12988	1.21285
5	1220.69995	584.69995	8.74000	72.40999	0.15000	1771.12988	1.20579
5	1221.59985	583.39990	8.82000	72.34000	0.14830	1775.12988	1.19790
5	1221.59985	581.79980	8.86000	72.21999	0.14710	1779.12988	1.19206
5	1221.00000	586.69995	8.82000	72.67999	0.14980	1783.12988	1.21197
5	1220.69995	584.09985	8.98000	72.57999	0.14660	1787.12988	1.20361
5	1220.69995	584.29980	8.82000	72.68999	0.14980	1791.12988	1.20418
5	1220.39990	585.89990	8.80000	72.89999	0.15110	1795.12988	1.21171
5	1216.89990	584.00000	8.84000	72.92999	0.15050	1803.12988	1.21567
5	1216.59985	582.89990	8.85000	72.84000	0.14990	1806.69995	1.21180
5	1148.29980	493.29980	8.99000	69.56000	0.13450	2169.12012	1.10518
5	1159.39990	495.50000	8.95000	69.53000	0.13510	2173.12085	0.0
5	1176.39990	503.09985	8.90000	70.00000	0.13770	2177.12036	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1188.89990	505.79980	8.89000	70.23000	0.13880	2181.11987	0.0
5	1246.09985	540.39990	8.95000	71.43999	0.14250	2185.12036	0.0
5	1247.19995	542.50000	8.84000	71.59000	0.14490	2189.11987	0.0
5	1248.09985	538.09985	8.84000	71.28000	0.14370	2193.12061	0.0
5	1248.69995	539.09985	8.85000	71.28000	0.14350	2197.12012	0.0
5	1249.59985	541.79980	8.89000	71.31000	0.14300	2201.12085	0.0
5	1249.59985	540.69995	8.86000	71.21999	0.14310	2205.12012	0.0

AVERAGE VALUES						
10- 7B- 31	TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
	(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
	0 - 233	13.09230	83.21455	0.13223	34.42307	13
	233 - 1045	8.85727	73.15535	0.15111	472.79956	11
	1045 - 1885	8.81454	72.58719	0.14946	1783.81689	11
	1885 - 2400	8.89599	70.74390	0.14068	2187.11743	10

Figure 7.7.6-12. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-12. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 78- 32		*** NORMALIZED TO TC=520 TH=1220 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
7	1211.09985	526.69995	12.87000	83.81000	0.13640	11.50000	0.0
7	1211.09985	525.69995	12.88000	83.84000	0.13640	19.50000	0.0
7	1210.50000	525.00000	12.91000	83.96999	0.13660	23.50000	0.0
7	1208.69995	524.39990	12.91000	84.00000	0.13670	27.50000	0.0
7	1208.39990	524.39990	12.89000	84.00999	0.13690	31.50000	0.0
7	1207.50000	524.39990	12.89000	84.03000	0.13700	35.50000	0.0
7	1207.79980	524.69995	12.89000	84.03999	0.13700	39.50000	0.0
7	1208.09985	525.69995	12.86000	84.04999	0.13740	43.50000	0.0
7	1207.79980	526.00000	12.84000	84.06000	0.13760	47.50000	0.0
7	1207.19995	525.29980	12.83000	84.03999	0.13760	51.50000	0.0
7	1207.19995	525.69995	12.81000	84.03999	0.13780	55.50000	0.0
7	1207.19995	526.00000	12.79000	84.01999	0.13800	59.50000	0.0
9	1198.09985	573.09985	8.30000	69.81000	0.14680	1763.12988	1.23465
9	1200.50000	573.00000	8.31000	69.90999	0.14700	1767.12988	1.22602
9	1200.19995	572.29980	8.30000	70.03000	0.14760	1771.12988	1.22490
9	1200.19995	571.79980	8.30000	70.14000	0.14820	1775.12988	1.22378
9	1214.89990	581.50000	8.34000	70.48000	0.14890	1779.12988	1.21254
9	1216.89990	583.19995	8.37000	70.71999	0.14930	1787.12988	1.21185
9	1216.89990	582.69995	8.39000	70.78999	0.14940	1791.12988	1.21070
9	1216.29980	581.69995	8.41000	70.84999	0.14910	1795.12988	1.20827
9	1214.89990	581.50000	8.42000	70.89000	0.14920	1799.12988	1.21202
9	1214.59985	582.29980	8.44000	70.95999	0.14910	1803.12988	1.21615
9	1216.29980	584.89990	8.47000	71.09999	0.14920	1806.69995	1.22095
9	1154.29980	476.69995	8.00000	68.17999	0.14540	2185.12036	0.0
9	1170.79980	484.29980	8.01000	68.54999	0.14660	2189.11987	0.0
9	1188.29980	486.19995	8.03000	68.78999	0.14730	2193.12061	0.0
9	1194.00000	485.50000	8.08000	68.93999	0.14700	2197.12012	0.0
9	1196.59985	486.29980	8.12000	69.03999	0.14680	2201.12085	0.0
9	1197.50000	487.19995	8.19000	69.14000	0.14580	2205.12012	0.0

AVERAGE VALUES

10- 78- 32		AVERAGE VALUES					NO. OF DATA
TIME RANGE (HRS)		RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)		
0 - 233		12.86416	83.99234	0.13712	37.16666	12	
1045 - 1885		8.36817	70.51628	0.14853	1785.27148	11	
1885 - 2400		8.07166	68.77327	0.14648	2195.11768	6	

981-2/

Figure 7.7.6-13. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-13. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 30		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
9	1225.09985	598.29980	13.90000	81.42999	0.11930	23.50000	0.0
9	1270.00000	520.69995	13.60000	80.70999	0.11970	27.50000	0.0
9	1228.00000	546.00000	7.74000	70.25000	0.15950	452.86694	0.0
9	1233.59985	548.39990	7.84000	70.35999	0.15780	456.86694	0.0
9	1235.00000	548.19995	7.94000	70.50999	0.15650	460.86694	0.0
9	1234.79980	548.19995	8.04000	70.67999	0.15530	464.86694	0.0
9	1217.19995	542.19995	8.20000	70.95000	0.15340	468.86694	0.0
9	1211.89990	535.89990	8.32000	71.17999	0.15230	472.86694	0.0
9	1218.39990	541.09985	8.35000	71.28999	0.15220	476.86694	0.0
9	1217.19995	540.00000	8.42000	71.42000	0.15150	480.86694	0.0
9	1216.89990	539.39990	8.48000	71.53000	0.15080	484.86694	0.0
9	1216.29980	538.89990	8.54000	71.64999	0.15030	488.86694	0.0
9	1216.29980	538.79980	8.58000	71.70999	0.14980	492.13281	0.0
11	1207.50000	545.69995	7.85000	68.70000	0.15030	1763.12988	1.10923
11	1209.59985	546.59985	7.86000	68.81000	0.15050	1767.12988	1.10580
11	1207.19995	545.09985	7.89000	68.73999	0.14980	1771.12988	1.10799
11	1210.79980	548.09985	7.86000	69.04999	0.15170	1779.12988	1.10730
11	1212.19995	549.79980	7.93000	69.37000	0.15170	1787.12988	1.10892
11	1213.09985	550.89990	7.99000	69.56999	0.15150	1795.12988	1.10989
11	1208.09985	549.50000	8.01000	69.62000	0.15130	1803.12988	1.11908
11	1216.29980	554.09985	8.07000	69.81999	0.15100	1806.69995	1.11111
11	1122.00000	443.79980	9.13000	66.75999	0.12200	2169.12012	0.0
11	1131.69995	447.39990	9.15000	67.00000	0.12270	2173.12085	0.0
11	1142.00000	449.79980	9.15000	67.18999	0.12330	2177.12036	0.0
11	1146.79980	450.39990	9.16000	67.23000	0.12340	2181.11987	0.0
11	1217.79980	487.50000	9.23000	68.42000	0.12690	2185.12036	0.0
11	1218.39990	488.00000	9.20000	68.42000	0.12720	2189.11987	0.0
11	1219.29980	487.79980	9.20000	68.48000	0.12750	2193.12061	0.0
11	1219.59985	489.09985	9.21000	68.53999	0.12750	2197.12012	0.0
11	1219.59985	489.00000	9.16000	68.62999	0.12850	2205.12012	0.0

AVERAGE VALUES

10-20A- 30		AVERAGE VALUES			
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	13.74999	81.06999	0.11950	25.50000	2
233 - 1045	8.22272	71.04810	0.15358	472.79956	11
1045 - 1885	7.93249	69.20990	0.15097	1784.07520	8
1885 - 2400	9.17666	67.85216	0.12544	2185.56201	9

Figure 7.7.6-14. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-14. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 32			*** NORMALIZED TO TC=520 TH=1220 ***			TIME (HRS)	P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
11	1208.69995	525.59985	13.07000	84.35999	0.13610	0.19500	0.0
11	1203.09985	523.50000	13.23000	84.37000	0.13450	11.50000	0.0
11	1209.89990	526.59985	12.95000	84.37000	0.13740	23.50000	0.0
11	1209.89990	527.59985	12.91000	84.37000	0.13790	27.50000	0.0
11	1209.89990	527.89990	12.87000	84.31999	0.13810	31.50000	0.0
11	1209.00000	527.89990	12.83000	84.29999	0.13850	35.50000	0.0
11	1209.00000	528.19995	12.79000	84.25999	0.13880	39.50000	0.0
11	1208.69995	528.59985	12.74000	84.25999	0.13930	43.50000	0.0
11	1208.69995	529.19995	12.69000	84.20999	0.13960	47.50000	0.0
11	1208.09985	529.19995	12.64000	84.15999	0.14000	51.50000	0.0
11	1207.79980	529.50000	12.61000	84.15999	0.14040	55.50000	0.0
11	1207.79980	529.89990	12.57000	84.09999	0.14070	59.50000	0.0
11	1219.00000	534.89990	7.20000	70.48000	0.17250	452.86694	0.0
11	1229.50000	538.00000	7.24000	70.56000	0.17190	456.86694	0.0
11	1204.29980	515.19995	7.59000	70.92000	0.16580	476.86694	0.0
11	1208.39990	523.89990	7.59000	71.04999	0.16630	480.86694	0.0
11	1208.09985	523.09985	7.65000	71.12000	0.16520	484.86694	0.0
11	1208.09985	522.79980	7.73000	71.18999	0.16380	488.86694	0.0
11	1208.09985	522.79980	7.79000	71.28999	0.16300	492.13281	0.0
13	1145.89990	494.00000	7.76000	68.12000	0.14950	2147.54932	1.11567
13	1156.69995	498.59985	7.81000	68.35999	0.14960	2151.55005	0.0
13	1176.09985	502.69995	7.85000	68.68999	0.15020	2155.55054	0.0
13	1224.79980	525.00000	8.03000	69.64999	0.15100	2163.54956	0.0
13	1225.39990	524.09985	8.08000	69.70999	0.15030	2167.55029	0.0
13	1226.59985	523.79980	8.11000	69.78000	0.15010	2171.54956	0.0
13	1226.29980	524.39990	8.16000	69.85999	0.14960	2175.54907	0.0
13	1227.79980	525.59985	8.17000	69.93999	0.14970	2179.54980	0.0
13	1227.79980	525.29980	8.21000	70.00999	0.14920	2183.55054	0.0

AVERAGE VALUES

7-189	10-20A- 32 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
	0 - 233	12.82499	84.26990	0.13844	35.55789	12
	233 - 1045	7.54142	70.94418	0.16693	476.19043	7
	1885 - 2400	8.01999	69.34656	0.14991	2166.21387	9

Figure 7.7.6-15. TELPS Leg Performance Data Normalized to TH = 1220 (F) TC = 520 (F)

TABLE 7.7.6-15. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 33		*** NORMALIZED TO TC=520 TH=1220 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
13	1157.59985	443.09985	13.90000	84.31999	0.12780	1.50000	0.0
15	1010.29980	498.59985	8.41000	67.18999	0.13420	1763.12988	1.71611
15	1008.69995	497.39990	8.47000	67.34000	0.13380	1767.12988	1.71759
15	1009.39990	498.09985	8.50000	67.43999	0.13370	1771.12988	1.71630
15	1010.19995	498.79980	8.52000	67.50000	0.13370	1775.12988	1.71851
15	1073.19995	536.79980	8.48000	68.37000	0.13790	1779.12988	1.58871
19	1161.50000	494.50000	8.39000	68.68999	0.14060	2169.12012	0.0
19	1177.59985	501.50000	8.40000	69.01999	0.14180	2173.12085	0.0
19	1189.79980	502.00000	8.42000	69.20000	0.14220	2177.12036	0.0
19	1236.79980	529.89990	8.49000	70.06000	0.14450	2185.12036	0.0
19	1237.09985	530.19995	8.53000	70.03000	0.14370	2189.11987	0.0
19	1237.69995	529.89990	8.56000	70.09999	0.14350	2193.12061	0.0
19	1237.09985	530.09985	8.62000	70.20999	0.14290	2197.12012	0.0
19	1237.69995	530.69995	8.64000	70.23999	0.14270	2201.12085	0.0
19	1237.69995	531.29980	8.69000	70.28999	0.14220	2205.12012	0.0

AVERAGE VALUES

10-20A- 33						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	13.90000	84.31999	0.12780	1.50000	1	
1045 - 1885	8.47599	67.56796	0.13466	1771.12891	5	
1885 - 2400	8.52666	69.75992	0.14268	2187.78418	9	

7.7.7 PERFORMANCE TEST DATA

LOT 10 - P-TYPE

$T_H = 1350^{\circ}\text{F}$

$T_C = 520^{\circ}\text{F}$

BATCH	SAMPLE	TOTAL TIME (HR)	FIGURE NUMBER
4A	940	2021	7.7.7-1
	941	2021	7.7.7-2
	942	1981	7.7.7-3
5A	933	1955	7.7.7-4
	934	1981	7.7.7-5
	935	1987	7.7.7-6
6B	40	2021	7.7.7-7
	41	1997	7.7.7-8
	42	2258	7.7.7-9
7B	33	2262	7.7.7-10
	34	2262	7.7.7-11
	35	2202	7.7.7-12
20A	34	2262	7.7.7-13
	35	2220	7.7.7-14
	36	463	7.7.7-15
	37	395	7.7.7-16

Figure 7.7.7-1. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-940		*** NORMALIZED TO TC=520 TH=1350 ***				TIME (HRS)	P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
1	1331.29980	533.09985	14.50000	99.17999	0.16960	2.20000	0.0
1	1365.79980	590.59985	13.62000	98.73000	0.17890	10.20000	0.0
1	1364.39990	593.19995	13.76000	98.67000	0.17690	14.20000	0.0
1	1360.79980	588.00000	13.86000	98.73999	0.17590	18.20000	0.0
1	1347.50000	561.19995	14.10000	99.17000	0.17440	22.20000	0.0
1	1343.79980	556.59985	14.17000	99.25999	0.17380	26.20000	0.0
1	1343.00000	559.50000	14.17000	99.14999	0.17340	30.20000	0.0
1	1341.89990	560.19995	14.15000	99.07999	0.17340	34.20000	0.0
1	1341.29980	561.19995	14.12000	99.00000	0.17350	38.20000	0.0
1	1341.29980	562.09985	14.11000	99.00000	0.17370	42.20000	0.0
1	1341.09985	562.79980	14.11000	98.90999	0.17330	46.20000	0.0
1	1326.50000	547.69995	13.43000	93.71999	0.16350	421.71680	0.0
1	1340.19995	580.00000	12.77000	93.64000	0.17160	423.71680	0.0
1	1338.79980	579.19995	12.35000	93.51999	0.17710	427.71680	0.0
1	1338.79980	579.19995	12.35000	93.51999	0.17710	427.71680	0.0
1	1339.89990	580.09985	12.18000	93.50999	0.17950	435.71680	0.0
1	1338.79980	579.89990	12.17000	93.50999	0.17960	439.71680	0.0
1	1340.79980	581.69995	12.10000	93.48999	0.18060	443.71680	0.0
1	1339.69995	582.39990	12.08000	93.40999	0.18060	447.71680	0.0
1	1341.59985	584.69995	12.03000	93.42999	0.18140	451.71680	0.0
1	1343.00000	584.89990	12.01000	93.42999	0.18160	455.71680	0.0
1	1341.89990	585.00000	12.03000	93.42000	0.18140	459.71680	0.0
1	1342.19995	585.79980	11.99000	93.40999	0.18200	463.71680	0.0
1	1341.29980	587.00000	11.98000	93.40999	0.18200	467.71680	0.0
1	1341.29980	587.89990	11.96000	93.37000	0.18230	471.29980	0.0
1	1219.59985	518.50000	11.48000	88.65999	0.17120	1688.62988	0.0
1	1271.79980	605.50000	10.76000	89.01999	0.18410	1692.62988	1.46576
1	1286.89990	604.00000	10.45000	89.12000	0.19010	1696.62988	1.40815
1	1286.29980	603.09985	10.15000	88.98000	0.19500	1700.62988	1.40693
1	1251.29980	517.50000	9.74000	87.37000	0.19600	1705.12988	1.20024
1	1246.39990	509.69995	9.71000	87.35999	0.19650	1708.62988	1.18803
1	1244.29980	509.29980	9.65000	87.39999	0.19790	1712.62988	1.19289
1	1244.09985	508.89990	9.63000	87.39999	0.19830	1716.62988	1.19242
1	1242.29980	507.00000	9.62000	87.40999	0.19860	1720.62988	1.19065
1	1242.00000	506.00000	9.66000	87.42000	0.19770	1724.62988	1.18810
1	1278.09985	528.89990	9.85000	88.46999	0.19860	1732.62988	1.16824
1	1279.79980	529.69995	9.72000	88.56000	0.20160	1736.62988	0.0
1	1278.59985	529.00000	9.72000	88.59000	0.20160	1740.62988	1.16734

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1277.19995	526.39990	9.71000	88.53000	0.20180	1744.62988	1.16311
1	1277.79980	527.29980	9.72000	88.57999	0.20180	1748.62988	1.16445
1	1280.59985	529.39990	9.76000	88.65999	0.20130	1752.62988	1.16358
1	1240.00000	487.59985	9.90000	85.48000	0.18450	1953.12964	1.13819
1	1268.29980	503.00000	9.75000	86.29999	0.19090	1957.13037	1.11637
1	1269.19995	504.29980	9.60000	86.40999	0.19430	1961.12988	1.11795
1	1267.19995	502.09985	9.41000	86.43999	0.19850	1965.13037	1.11642
1	1266.59985	502.19995	9.33000	86.50000	0.20040	1969.12988	1.11768
1	1267.69995	503.29980	9.30000	86.56000	0.20140	1973.13062	1.11889
1	1270.00000	504.79980	9.26000	86.67000	0.20270	1977.13013	1.11742
1	1268.89990	504.89990	9.18000	86.85999	0.20530	1993.13037	1.12063
1	1268.59985	505.09985	9.19000	86.90999	0.20560	1997.12988	1.12166
1	1269.50000	505.39990	9.17000	86.98999	0.20620	2001.13037	1.12065
1	1268.29980	504.50000	9.19000	87.09000	0.20630	2013.13013	1.12059
1	1268.00000	504.59985	9.19000	87.14000	0.20660	2017.12964	1.12222
1	1268.89990	505.59985	9.20000	87.20000	0.20650	2021.13013	1.12228

AVERAGE VALUES

10- 4A-940						
TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER - (WATT)	TIME (HRS)	NO. OF DATA	
0 - 233	14.06090	98.98991	0.17425	25.83635	11	
233 - 1045	12.24499	93.48489	0.17859	445.54346	14	
1045 - 1885	9.95812	88.21677	0.19576	1720.16016	16	
1885 - 2400	9.35922	86.65761	0.20071	1984.51343	13

Figure 7.7.7-2. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-2. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-941		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1334.59985	549.19995	14.71000	98.95000	0.16650	2.20000	0.0
3	1367.39990	587.00000	13.57000	98.67999	0.17940	6.20000	0.0
3	1361.89990	598.29980	13.54000	98.07999	0.17750	6.20000	0.0
3	1361.89990	598.29980	13.54000	98.07999	0.17750	10.20000	0.0
3	1360.00000	602.19995	13.20000	97.70000	0.18070	14.20000	0.0
3	1360.00000	598.29980	13.11000	97.68999	0.18190	18.20000	0.0
3	1342.50000	578.29980	13.23000	97.84000	0.18080	22.20000	0.0
3	1343.59985	578.89990	13.18000	97.76999	0.18130	26.20000	0.0
3	1342.50000	579.59985	13.12000	97.70000	0.18190	30.20000	0.0
3	1341.29980	579.29980	13.03000	97.60999	0.18290	34.20000	0.0
3	1341.09985	580.19995	12.98000	97.48000	0.18300	38.20000	0.0
3	1341.89990	581.79980	12.92000	97.39000	0.18350	42.20000	0.0
3	1341.29980	582.50000	12.84000	97.31999	0.18440	46.20000	0.0
3	1369.39990	579.19995	11.92000	94.28000	0.18650	421.71680	0.0
3	1383.89990	613.39990	11.26000	93.75999	0.19520	423.71680	0.0
3	1383.39990	613.29980	10.97000	93.50999	0.19920	427.71680	0.0
3	1383.39990	613.29980	10.97000	93.50999	0.19920	427.71680	0.0
3	1382.29980	614.69995	10.86000	93.48000	0.20120	435.71680	0.0
3	1382.29980	615.69995	10.84000	93.48999	0.20160	439.71680	0.0
3	1386.09985	618.69995	10.80000	93.45000	0.20210	443.71680	0.0
3	1385.89990	619.59985	10.90000	93.51999	0.20060	447.71680	0.0
3	1329.89990	587.69995	11.37000	93.26999	0.19130	451.71680	0.0
3	1331.79980	589.09985	11.38000	93.26999	0.19110	455.71680	0.0
3	1331.79980	589.29980	11.37000	93.26999	0.19130	459.71680	0.0
3	1331.00000	590.00000	11.37000	93.31000	0.19140	463.71680	0.0
3	1330.39990	590.89990	11.35000	93.28999	0.19160	467.71680	0.0
3	1330.39990	591.69995	11.39000	93.28000	0.19110	471.29980	0.0
3	1228.29980	513.69995	13.15000	89.64999	0.15280	1688.62988	1.25041
3	1242.89990	613.59985	11.94000	88.59999	0.16430	1692.62988	1.61395
3	1282.89990	612.19995	12.13000	88.60999	0.16190	1696.62988	1.45594
3	1300.79980	610.19995	12.37000	88.75000	0.15920	1700.62988	1.38797
3	1276.89990	545.79980	12.59000	87.37000	0.15160	1705.12988	1.22357
3	1273.50000	538.09985	12.62000	87.37000	0.15120	1708.62988	1.20767
3	1273.19995	538.19995	12.57000	87.45000	0.15210	1712.62988	1.21002
3	1274.00000	538.39990	12.47000	87.56000	0.15370	1716.62988	1.20738
3	1274.29980	537.79980	12.34000	87.62000	0.15550	1720.62988	1.20543
3	1274.00000	536.79980	12.19000	87.67999	0.15760	1724.62988	1.20305
3	1275.19995	537.79980	12.15000	87.78999	0.15860	1728.62988	1.20334

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1291.50000	548.00000	12.06000	88.31000	0.16170	1732.62988	1.19424
3	1293.19995	548.79980	11.72000	88.26999	0.16620	1736.62988	1.19311
3	1292.89990	549.29980	11.58000	88.31999	0.16840	1740.62988	1.19517
3	1292.29980	547.50000	11.48000	88.32999	0.16990	1744.62988	1.19061
3	1292.00000	547.39990	11.43000	88.40999	0.17090	1748.62988	1.19094
3	1293.50000	548.59985	11.44000	88.54999	0.17130	1752.62988	1.19124
3	1329.59985	560.09985	11.54000	87.95999	0.16760	1953.12964	1.14247
3	1308.19995	551.79980	10.99000	87.31999	0.17340	1957.13037	1.16611
3	1306.19995	549.29980	10.66000	87.26999	0.17860	1961.12988	1.16352
3	1305.89990	549.50000	10.39000	87.29999	0.18340	1965.13037	1.16444
3	1305.39990	548.69995	10.23000	87.32999	0.18630	1969.12988	1.16365
3	1306.19995	550.00000	10.12000	87.40999	0.18880	1973.13062	1.16543
3	1306.50000	553.39990	10.04000	87.48000	0.19060	1977.13013	1.17509
3	1305.69995	554.69995	9.69000	87.71999	0.19840	1993.13037	1.18095
3	1305.69995	554.39990	9.64000	87.75999	0.19970	1997.12988	1.18026
3	1306.19995	555.09985	9.64000	87.87000	0.20030	2001.13037	1.18101
3	1305.09985	554.29980	9.65000	88.12999	0.20110	2013.13013	1.18086
3	1304.79980	554.29980	9.67000	88.23000	0.20130	2017.12964	1.18203
3	1307.09985	555.50000	9.69000	88.35999	0.20150	2021.13013	1.18043

AVERAGE VALUES					
10- 4A-941	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	13.30538	97.86836	0.18010	22.81537	13
233 - 1045	11.19642	93.47771	0.19524	445.54346	14
1045 - 1885	12.13117	88.15517	0.16041	1720.65820	17
1885 - 2400	10.14999	87.70297	0.19008	1984.51343	13

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Figure 7.7.7-3. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-3. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 4A-942		*** NORMALIZED TO TC=520 TH=1350 ***				TIME (HRS)	P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
5	1313.29980	534.69995	14.35000	98.46999	0.16890	2.20000	0.0
5	1354.69995	586.69995	13.87000	98.12999	0.17360	10.20000	0.0
5	1353.29980	591.50000	13.89000	98.14999	0.17340	14.20000	0.0
5	1350.50000	587.00000	13.79000	98.09999	0.17450	18.20000	0.0
5	1347.19995	569.19995	13.91000	98.39000	0.17400	22.20000	0.0
5	1344.69995	568.59985	13.95000	98.37000	0.17340	26.20000	0.0
5	1344.09985	569.59985	13.98000	98.28999	0.17280	30.20000	0.0
5	1343.29980	570.50000	13.98000	98.25999	0.17270	34.20000	0.0
5	1342.69995	571.79980	14.02000	98.17000	0.17190	38.20000	0.0
5	1330.00000	573.39990	13.87000	97.92000	0.17280	42.20000	0.0
5	1342.69995	574.09985	13.88000	97.84000	0.17250	46.20000	0.0
5	1303.39990	593.29980	12.18000	91.98000	0.17360	451.71680	0.0
5	1308.50000	597.00000	11.78000	91.93999	0.17940	467.71680	0.0
5	1308.50000	598.50000	11.72000	91.89999	0.18020	471.29980	0.0
5	1228.00000	561.59985	11.75000	88.64999	0.16730	1688.62988	1.43114
5	1257.69995	636.89990	10.81000	88.50000	0.18120	1692.62988	1.67468
5	1284.59985	638.19995	10.37000	88.21999	0.18760	1696.62988	1.56856
5	1288.29980	640.50000	10.17000	88.43999	0.19230	1700.62988	1.56596
5	1263.09985	556.39990	9.94000	86.53999	0.18840	1705.12988	1.29841
5	1259.69995	550.69995	9.86000	86.64000	0.19030	1708.62988	1.28842
5	1259.09985	555.29980	9.76000	87.01999	0.19400	1712.62988	1.30640
5	1259.09985	553.39990	9.68000	86.82999	0.19480	1716.62988	1.29953
5	1258.79980	553.19995	9.63000	86.90999	0.19610	1720.62988	1.29954
5	1259.09985	551.89990	9.63000	86.95000	0.19620	1724.62988	1.29334
5	1259.69995	552.69995	9.65000	87.00000	0.19610	1728.62988	1.29524
5	1296.29980	577.00000	9.86000	88.31999	0.19790	1732.62988	1.27760
5	1297.69995	579.00000	9.75000	88.45999	0.20070	1736.62988	1.28079
5	1296.29980	577.59985	9.75000	88.45999	0.20060	1740.62988	1.28015
5	1295.69995	576.89990	9.76000	88.59000	0.20110	1744.62988	1.27926
5	1295.39990	576.09985	9.78000	88.50999	0.20030	1748.62988	1.27742
5	1296.89990	575.89990	9.88000	88.53000	0.19840	1752.62988	1.27179
5	1274.89990	559.79980	9.98000	84.87000	0.18050	1913.13013	1.27652
5	1238.00000	531.19995	9.97000	82.71999	0.17160	1917.13086	1.28251
5	1236.19995	527.50000	10.02000	83.39999	0.17350	1921.13037	1.27480
5	1234.19995	525.39990	10.00000	83.70999	0.17520	1925.12988	1.27326
5	1233.29980	519.59985	9.96000	83.51999	0.17510	1929.13037	1.25520
5	1233.29980	519.09985	9.96000	83.70000	0.17580	1933.12988	1.25392
5	1261.39990	540.09985	10.28000	84.62000	0.17410	1937.13062	1.24624

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1259.09985	540.50000	10.10000	84.67999	0.17760	1953.12964	1.25424
5	1258.79980	541.79980	10.08000	84.84000	0.17860	1957.13037	1.25952
5	1259.09985	540.19995	10.09000	84.70999	0.17780	1961.12988	1.25300
5	1257.39990	539.09985	10.10000	84.78000	0.17790	1973.13062	1.25458
5	1256.79980	540.39990	10.10000	84.95999	0.17870	1977.13013	1.26112
5	1258.19995	542.59985	10.08000	85.09999	0.17960	1981.12939	1.26390

AVERAGE VALUES						
10- 4A-942	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE (HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	13.95363	98.18987	0.17277	25.83635	11	
233 - 1045	11.89333	91.93994	0.17773	463.57764	3	
1045 - 1885	10.00176	87.79811	0.19313	1720.65820	17	
1885 - 2400	10.05538	84.27760	0.17662	1944.51367	13

Figure 7.7.7-4. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-4. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-933		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
7	1361.29980	586.69995	14.94000	99.00000	0.16400	0.62000	0.0
7	1335.79980	536.29980	15.74000	99.51999	0.15730	2.20000	0.0
7	1359.09985	588.29980	14.92000	99.15999	0.16480	10.20000	0.0
7	1357.19995	589.59985	14.97000	99.23999	0.16450	14.20000	0.0
7	1353.29980	582.50000	15.01000	99.40999	0.16460	18.20000	0.0
7	1347.50000	565.00000	15.16000	99.78999	0.16430	22.20000	0.0
7	1343.29980	563.69995	15.29000	99.81000	0.16290	26.20000	0.0
7	1341.89990	563.39990	15.29000	99.79999	0.16290	30.20000	0.0
7	1340.79980	563.09985	15.29000	99.81000	0.16290	34.20000	0.0
7	1340.19995	564.09985	15.36000	99.81000	0.16210	38.20000	0.0
7	1341.29980	564.69995	15.36000	99.78999	0.16210	42.20000	0.0
7	1341.29980	565.39990	15.34000	99.79999	0.16240	46.20000	0.0
7	1351.59985	569.00000	12.00000	96.39999	0.19370	421.71680	0.0
7	1367.69995	602.00000	12.02000	96.09000	0.19200	423.71680	0.0
7	1368.29980	601.39990	12.08000	96.18999	0.19150	427.71680	0.0
7	1368.29980	601.39990	12.08000	96.18999	0.19150	427.71680	0.0
7	1368.50000	602.29980	12.29000	96.31999	0.18870	435.71680	0.0
7	1368.79980	603.09985	12.37000	96.28000	0.18740	439.71680	0.0
7	1331.00000	580.29980	12.65000	96.14000	0.18270	451.71680	0.0
7	1333.19995	582.39990	12.69000	96.15999	0.18220	455.71680	0.0
7	1333.00000	582.39990	12.73000	96.12000	0.18150	459.71680	0.0
7	1332.09985	582.69995	12.74000	96.15999	0.18150	463.71680	0.0
7	1331.00000	583.69995	12.77000	96.14999	0.18100	467.71680	0.0
7	1331.00000	584.59985	12.79000	96.12999	0.18070	471.29980	0.0
9	1217.79980	531.89990	12.19000	92.78000	0.17650	1688.62988	1.34630
9	1175.79980	462.29980	11.44000	90.67999	0.17970	1705.12988	1.22914
9	1254.19995	566.19995	11.45000	92.20999	0.18560	1736.62988	1.36170
9	1279.19995	522.09985	10.63000	90.75999	0.19370	1947.12988	1.14548
9	1284.29980	524.29980	10.64000	91.00999	0.19460	1951.13037	1.14068
9	1284.89990	525.59985	10.59000	91.10999	0.19600	1955.12988	1.14286

AVERAGE VALUES

10- 5A-933						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	15.22249	99.57820	0.16290	23.73499	12	
233 - 1045	12.43416	96.19406	0.18620	445.51489	12	
1045 - 1885	11.69333	91.88997	0.18060	1710.12891	3	
1885 - 2400	10.62000	90.95996	0.19477	1951.12891	3	

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Figure 7.7.7-5. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-5. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-934		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
9	1380.89990	611.59985	14.00000	99.04999	0.17520	2.20000	0.0
9	1354.69995	607.09985	14.19000	99.23999	0.17350	6.20000	0.0
9	1353.29980	609.00000	14.28000	99.26999	0.17250	10.20000	0.0
9	1352.19995	610.29980	14.37000	99.23000	0.17130	14.20000	0.0
9	1347.19995	603.19995	14.48000	99.45000	0.17080	18.20000	0.0
9	1342.69995	594.39990	14.62000	99.64999	0.16980	22.20000	0.0
9	1342.69995	596.39990	14.65000	99.62000	0.16930	26.20000	0.0
9	1335.50000	602.79980	13.63000	96.03000	0.16910	451.71680	0.0
9	1334.59985	605.09985	13.29000	95.92999	0.17320	467.71680	0.0
9	1333.00000	605.29980	13.17000	95.92000	0.17460	471.29980	0.0
11	1226.89990	512.00000	11.26000	90.18999	0.18060	1688.62988	1.24810
11	1276.89990	598.09985	10.83000	90.89000	0.19060	1692.62988	1.41605
11	1281.50000	597.00000	10.59000	90.75999	0.19450	1696.62988	1.39727
11	1283.19995	598.59985	10.45000	90.68999	0.19680	1700.62988	1.39773
11	1254.79980	525.69995	10.20000	89.25000	0.19520	1705.12988	1.21696
11	1250.69995	518.59985	10.20000	89.12000	0.19470	1708.62988	1.20557
11	1252.69995	521.69995	10.22000	89.26999	0.19490	1712.62988	1.20981
11	1252.19995	521.00000	10.25000	89.28999	0.19450	1720.62988	1.20958
11	1252.19995	520.19995	10.26000	89.32999	0.19440	1724.62988	1.20670
11	1251.00000	521.09985	10.26000	89.32999	0.19450	1728.62988	1.21259
11	1289.19995	543.59985	10.47000	90.42000	0.19520	1732.62988	1.18663
11	1287.50000	543.59985	10.32000	90.39999	0.19800	1736.62988	1.19062
11	1288.89990	543.69995	10.32000	90.39000	0.19800	1740.62988	1.18776
11	1289.50000	543.79980	10.35000	90.48000	0.19780	1744.62988	1.18656
11	1289.79980	545.19995	10.35000	90.50000	0.19790	1748.62988	1.19002
11	1274.29980	518.00000	9.74000	87.48999	0.19640	1913.13013	1.14519
11	1275.19995	521.09985	9.74000	87.75000	0.19770	1917.13086	1.15210
11	1276.89990	523.50000	9.77000	87.87000	0.19760	1921.13037	1.15556
11	1280.09985	524.00000	9.80000	88.03999	0.19780	1925.12988	1.14933
11	1280.29980	524.59985	9.82000	88.10999	0.19760	1929.13037	1.15017
11	1280.89990	525.69995	9.85000	88.20999	0.19750	1933.12988	1.15295
11	1280.89990	525.00000	9.86000	88.03999	0.19640	1937.13062	1.14988
11	1279.50000	523.50000	9.91000	88.25000	0.19650	1953.12964	1.14912
11	1279.79980	524.19995	9.94000	88.31000	0.19610	1957.13037	1.15015
11	1280.59985	525.29980	9.97000	88.40999	0.19600	1961.12988	1.15159
11	799.19995	166.70000	9.85000	80.34999	0.16390	1981.12939	1.72526

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AVERAGE VALUES						
10- 5A-934	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
(HRS)						
0 - 233	14.37000	99.35849	0.17177	14.20000	7	
233 - 1045	13.36333	95.95996	0.17230	463.57764	3	
1045 - 1885	10.42199	90.02057	0.19451	1718.79541	15	
1885 - 2400	9.84090	87.34807	0.19395	1938.94727	11

Figure 7.7.7-6. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-6. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 5A-935		*** NORMALIZED TO TC=520 TH=1350 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
11	1322.89990	528.89990	15.81000	100.42000	0.15940	2.20000	0.0
11	1355.79980	582.19995	14.75000	99.84000	0.16900	6.20000	0.0
11	1353.29980	585.09985	14.57000	99.78999	0.17080	10.20000	0.0
11	1351.59985	587.29980	14.61000	99.75000	0.17020	14.20000	0.0
11	1345.50000	580.89990	14.70000	99.82999	0.16950	18.20000	0.0
11	1340.79980	560.79980	14.78000	100.23999	0.17000	22.20000	0.0
11	1340.79980	561.50000	14.81000	100.21999	0.16960	26.20000	0.0
11	1341.29980	562.50000	14.83000	100.17999	0.16920	30.20000	0.0
11	1342.50000	563.69995	14.84000	100.12999	0.16890	34.20000	0.0
11	1342.19995	565.69995	14.87000	100.03999	0.16820	38.20000	0.0
11	1339.39990	565.39990	14.90000	100.00999	0.16780	42.20000	0.0
11	1341.09985	566.69995	14.86000	99.98000	0.16820	46.20000	0.0
11	1337.09985	546.19995	13.54000	96.00999	0.17020	421.71680	0.0
11	1308.50000	549.89990	13.09000	95.09000	0.17270	451.71680	0.0
13	1231.29980	503.69995	11.90000	90.32999	0.17140	1688.62988	1.20874
13	1293.50000	610.69995	11.04000	90.87000	0.18690	1692.62988	1.41377
13	1315.29980	607.69995	10.72000	91.09000	0.19340	1696.62988	1.33564
13	1316.69995	607.79980	10.47000	91.09000	0.19820	1700.62988	1.33199
13	1270.59985	511.29980	10.24000	89.29999	0.19460	1705.12988	1.13469
13	1264.29980	496.39990	10.02000	88.98999	0.19770	1708.62988	1.10756
13	1264.29980	496.89990	10.09000	89.09999	0.19680	1712.62988	1.10873
13	1263.09985	495.09985	10.02000	89.10999	0.19820	1720.62988	1.10603
13	1263.09985	494.59985	10.08000	89.20000	0.19730	1724.62988	1.10470
13	1261.39990	494.89990	10.19000	89.28999	0.19560	1728.62988	1.10947
13	1297.69995	514.59985	10.48000	90.39000	0.19500	1732.62988	0.0
13	1296.29980	514.39990	10.31000	90.32999	0.19790	1736.62988	0.0
13	1296.59985	513.89990	10.30000	90.34000	0.19810	1740.62988	0.0
13	1297.39990	513.89990	10.29000	90.39999	0.19850	1744.62988	0.0
13	1297.69995	515.00000	10.26000	90.42000	0.19930	1748.62988	0.0
13	1295.69995	514.29980	10.30000	90.45999	0.19850	1752.62988	0.0
13	1272.29980	498.50000	9.87000	87.51999	0.19400	1919.12988	0.0
13	1281.50000	501.39990	9.79000	87.89000	0.19730	1923.13062	0.0
13	1281.50000	502.89990	9.73000	88.01999	0.19910	1927.13013	0.0
13	1284.59985	504.09985	9.69000	88.17000	0.20060	1931.13086	0.0
13	1284.29980	505.59985	9.63000	88.25999	0.20230	1935.13037	0.0
13	1285.19995	507.19995	9.64000	88.35999	0.20250	1939.12964	0.0
13	1285.50000	507.00000	9.69000	88.48999	0.20210	1943.13037	0.0
13	1285.50000	508.39990	9.76000	88.82999	0.20200	1959.13062	0.0

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
13	1285.50000	508.69995	9.80000	88.87999	0.20160	1963.13013	0.0
13	1286.29980	509.50000	9.80000	88.93999	0.20180	1967.12964	0.0
13	1289.50000	510.79980	9.87000	89.20999	0.20160	1979.13037	0.0
13	1289.50000	511.19995	9.86000	89.23999	0.20180	1983.12988	0.0
13	1288.00000	511.09985	9.90000	89.26999	0.20130	1987.13037	0.0

AVERAGE VALUES						
10- 5A-935	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	14.86083	100.03574	0.16840	24.19998	12	
233 - 1045	13.31499	95.54999	0.17145	436.71680	2	
1045 - 1885	10.41937	90.04427	0.19484	1720.91016	16	
1885 - 2400	9.77153	88.54453	0.20061	1950.51367	13

Figure 7.7.7-7. TELPS Leg Performance. Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-7. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 6B- 40		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX. HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR	
(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)		
13 1323.09985	526.29980	15.19000	99.56999	0.16320	2.20000	0.0	
13 1364.09985	584.69995	14.13000	99.04999	0.17350	6.20000	0.0	
13 1362.39990	587.69995	13.96000	99.12999	0.17590	10.20000	0.0	
13 1362.39990	587.69995	13.96000	99.12999	0.17590	14.20000	0.0	
13 1350.79980	578.00000	14.07000	99.34999	0.17540	18.20000	0.0	
13 1344.69995	556.29980	14.22000	99.75000	0.17500	22.20000	0.0	
13 1339.39990	553.69995	14.29000	99.76999	0.17410	26.20000	0.0	
13 1339.39990	554.69995	14.35000	99.70999	0.17320	30.20000	0.0	
13 1340.50000	556.29980	14.33000	99.70999	0.17340	34.20000	0.0	
13 1340.19995	557.29980	14.34000	99.65999	0.17320	38.20000	0.0	
13 1338.29980	557.29980	14.34000	99.62999	0.17300	42.20000	0.0	
13 1338.00000	556.59985	14.33000	99.62999	0.17320	46.20000	0.0	
15 1344.09985	584.79980	11.93000	95.07999	0.18950	435.71680	0.0	
15 1343.59985	585.59985	11.90000	95.07999	0.19000	439.71680	0.0	
15 1343.00000	586.19995	11.93000	95.04999	0.18930	443.71680	0.0	
15 1341.59985	586.69995	11.90000	94.98999	0.18950	447.71680	0.0	
15 1332.09985	580.19995	11.94000	94.92999	0.18860	451.71680	0.0	
15 1336.89990	583.79980	11.93000	94.96999	0.18910	455.71680	0.0	
15 1336.00000	584.59985	11.94000	94.87000	0.18850	459.71680	0.0	
15 1334.39990	585.29980	11.97000	94.84000	0.18790	463.71680	0.0	
15 1333.19995	583.69995	11.96000	94.85999	0.18800	471.29980	0.0	
19 1231.29980	541.09985	11.18000	89.67000	0.17980	1688.62988	1.33879	
19 1253.00000	633.00000	10.23000	89.39999	0.19540	1692.62988	1.67295	
19 1290.29980	633.89990	9.87000	89.50000	0.20280	1696.62988	1.52711	
19 1298.59985	631.00000	9.75000	89.45999	0.20530	1700.62988	1.48445	
19 1234.50000	523.09985	9.11000	87.07999	0.20810	1705.12988	1.26428	
19 1226.29980	505.19995	9.11000	86.87000	0.20700	1708.62988	1.22703	
19 1225.69995	505.50000	9.15000	86.98000	0.20670	1712.62988	1.23036	
19 1225.69995	505.19995	9.17000	87.03000	0.20650	1716.62988	1.22917	
19 1224.50000	503.69995	9.19000	87.06999	0.20630	1720.62988	1.22725	
19 1224.50000	503.00000	9.22000	87.17000	0.20600	1724.62988	1.22546	
19 1226.00000	505.39990	9.26000	87.25000	0.20560	1728.62988	1.22893	
19 1276.29980	534.89990	9.54000	88.62999	0.20590	1732.62988	1.19155	
19 1276.59985	536.00000	9.59000	88.73000	0.20530	1736.62988	1.19360	
19 1275.50000	535.09985	9.61000	88.73000	0.20490	1740.62988	1.19406	
19 1274.89990	533.59985	9.63000	88.79999	0.20470	1744.62988	1.19081	
19 1294.00000	566.29980	9.61000	88.64000	0.20440	1953.12964	1.24710	
19 1288.89990	562.29980	9.62000	88.64000	0.20430	1957.13037	1.24725	

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
19	1288.29980	561.69995	9.62000	88.68999	0.20440	1961.12988	1.24710
19	1287.79980	560.69995	9.65000	88.79999	0.20420	1965.13037	1.24512
19	1287.19995	562.39990	9.69000	88.89000	0.20390	1969.12988	1.25169
19	1287.79980	564.00000	9.72000	88.93999	0.20330	1973.13062	1.25571
19	1286.29980	564.50000	9.88000	89.25000	0.20160	1993.13037	1.26158
19	1286.09985	564.39990	9.89000	89.25999	0.20140	1997.12988	1.26190
19	1286.29980	565.39990	9.93000	89.34000	0.20100	2001.13037	1.26495
19	1286.09985	565.79980	9.99000	89.48999	0.20050	2013.13013	1.26738
19	1285.79980	565.89990	10.00000	89.51999	0.20040	2017.12964	1.26835
19	1286.59985	566.50000	10.01000	89.59999	0.20050	2021.13013	1.26818

AVERAGE VALUES						
10- 6B- 40	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE (HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	14.29249	99.50740	0.17325	24.19998	12	
233 - 1045	11.93332	94.96326	0.18893	452.11475	9	
1045 - 1885	9.57399	88.15790	0.20335	1716.66211	15	
1885 - 2400	9.80083	89.08823	0.20249	1985.12891	12

Figure 7.7.7-8. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-8. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 6B- 41		*** NORMALIZED TO TC=520 TH=1350 ***					P. FACTOR
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(N OHM)	(MV)	(WATT)	(HRS)	
15	1322.29980	529.50000	15.39000	100.00999	0.16250	2.20000	0.0
15	1361.29980	587.00000	14.26000	99.37000	0.17310	6.20000	0.0
15	1361.29980	587.00000	14.26000	99.37000	0.17310	10.20000	0.0
15	1361.29980	587.00000	14.26000	99.37000	0.17310	14.20000	0.0
15	1350.79980	580.50000	14.53000	99.67999	0.17100	18.20000	0.0
15	1343.79980	563.39990	14.68000	100.03000	0.17040	22.20000	0.0
15	1339.09985	561.50000	14.71000	100.03999	0.17010	26.20000	0.0
15	1339.89990	563.09985	14.74000	99.98000	0.16960	30.20000	0.0
15	1341.89990	565.69995	14.72000	99.92999	0.16950	34.20000	0.0
15	1342.19995	566.69995	14.73000	99.90999	0.16950	38.20000	0.0
15	1339.09985	565.69995	14.76000	99.87000	0.16890	42.20000	0.0
15	1340.50000	567.00000	14.76000	99.87000	0.16890	46.20000	0.0
19	1297.39990	559.69995	10.72000	94.59999	0.20860	459.71680	0.0
19	1303.39990	564.29980	10.99000	92.79999	0.19580	463.71680	0.0
19	1321.69995	580.09985	10.71000	93.29999	0.20320	467.71680	0.0
21	1269.19995	497.79980	11.90000	83.93999	0.14810	1929.13037	1.10030
21	1283.79980	502.09985	11.76000	84.53999	0.15200	1933.12988	0.0
21	1284.89990	503.59985	11.67000	84.85999	0.15430	1937.13062	0.0
21	1285.19995	502.79980	11.67000	85.06000	0.15500	1941.13013	0.0
21	1285.19995	504.39990	11.75000	85.18999	0.15440	1945.13062	0.0
21	1285.19995	504.69995	11.75000	85.25999	0.15470	1949.13013	0.0
21	1285.79980	505.79980	11.97000	85.12000	0.15130	1969.12988	0.0
21	1285.50000	506.00000	11.92000	85.28999	0.15260	1973.13062	0.0
21	1285.79980	506.39990	11.90000	85.34000	0.15300	1977.13013	0.0
21	1284.29980	505.59985	11.71000	85.76999	0.15710	1989.13086	0.0
21	1283.79980	505.29980	11.63000	85.92000	0.15870	1993.13037	0.0
21	1283.79980	508.79980	11.54000	86.23999	0.16110	1997.12988	0.0

AVERAGE VALUES

7-209	10- 6B- 41					
	TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
	(HRS)	(N OHM)	(MV)	(WATT)	(HRS)	
	0 - 233	14.64999	99.78572	0.16997	24.19998	12
	233 - 1045	10.80666	92.56666	0.20252	463.71680	3
	1885 - 2400	11.76416	85.21072	0.15436	1961.12915	12

Figure 7.7.7-9. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-9. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 68- 42		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1341.59985	550.19995	14.69000	99.42999	0.16830	3.33333	0.0
1	1340.50000	554.39990	14.57000	99.59000	0.17020	24.39999	0.0
1	1344.69995	562.09985	14.54000	99.42000	0.16990	27.88329	0.0
1	1338.29980	559.89990	14.63000	99.23000	0.16830	47.33330	0.0
1	1336.00000	559.89990	14.64000	99.17999	0.16800	51.33330	0.0
1	1335.50000	559.89990	14.63000	99.09999	0.16780	55.33330	0.0
1	1334.59985	560.19995	14.65000	99.03999	0.16740	59.33330	0.0
1	1333.79980	560.19995	14.66000	98.98000	0.16710	63.33330	0.0
1	1333.50000	560.19995	14.69000	98.92000	0.16660	67.33330	0.0
1	1333.19995	560.50000	14.68000	98.89000	0.16660	71.33330	0.0
1	1333.00000	560.50000	14.68000	98.85999	0.16640	75.33330	0.0
1	1334.89990	561.79980	14.67000	98.81999	0.16640	79.33330	0.0
1	1337.39990	563.69995	14.68000	98.73000	0.16600	85.33330	0.0
1	1350.00000	493.39990	11.58000	92.90999	0.18640	416.77979	0.0
1	1353.00000	597.69995	11.50000	92.89999	0.18760	422.19678	0.0
1	1348.59985	596.39990	11.52000	92.84000	0.18700	424.77979	0.0
1	1347.69995	596.39990	11.50000	92.78000	0.18700	428.77979	0.0
1	1347.69995	596.39990	11.49000	92.76999	0.18720	432.77979	0.0
1	1346.89990	595.69995	11.50000	92.78000	0.18720	436.77979	0.0
1	1350.50000	598.19995	11.45000	92.79999	0.18800	440.77979	0.0
1	1350.79980	597.89990	11.45000	92.76999	0.18790	444.77979	0.0
1	1339.69995	585.19995	11.52000	92.70999	0.18650	448.77979	0.0
1	1339.09985	585.59985	11.52000	92.71999	0.18650	452.77979	0.0
1	1341.29980	584.89990	11.51000	92.73000	0.18680	456.77979	0.0
1	1340.79980	584.09985	11.50000	92.73999	0.18710	460.77979	0.0
1	1339.69995	583.79980	11.49000	92.75000	0.18720	462.77979	0.0
1	1278.59985	515.39990	10.11000	88.70000	0.19460	1797.77979	1.12746
1	1279.19995	516.69995	10.09000	88.73999	0.19520	1799.77979	1.13028
1	1279.19995	517.59985	10.04000	88.78000	0.19630	1803.77979	1.13272
1	1278.29980	516.89990	10.02000	88.75000	0.19660	1807.77979	1.13314
1	1277.19995	515.29980	9.97000	88.73999	0.19750	1811.77979	1.13051
1	1278.09985	515.29980	9.94000	88.71999	0.19800	1815.77979	1.12885
1	1277.50000	515.69995	9.89000	88.67000	0.19880	1819.77979	1.13147
1	1278.09985	515.89990	9.86000	88.62000	0.19920	1823.77979	1.13118
1	1277.79980	515.89990	9.82000	88.59999	0.19980	1831.77979	1.13137
1	1278.09985	516.29980	9.82000	88.62000	0.19990	1851.77979	1.13194
1	1277.50000	515.79980	9.83000	88.62000	0.19970	1855.77979	1.13209
1	1277.79980	516.09985	9.77000	88.62000	0.20090	1859.77979	1.13183

2

	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
1	1277.79980	516.39990	9.80000	88.60999	0.20030	1863.77979	1.13292
1	1277.50000	516.59985	9.80000	88.64000	0.20050	1867.77979	1.13405
1	1296.59985	531.19995	9.94000	88.00999	0.19480	2221.77979	1.13256
1	1295.69995	530.79980	9.73000	88.00999	0.19910	2225.77930	1.13318
1	1295.39990	530.69995	9.68000	88.00999	0.20000	2229.77979	1.13314
1	1295.39990	530.29980	9.67000	88.01999	0.20040	2233.78052	1.13284
1	1295.69995	530.00000	9.66000	87.96999	0.20020	2237.78003	1.13107
1	1295.69995	530.39990	9.66000	87.95000	0.20010	2241.77954	1.13179
1	1355.50000	585.29980	9.98000	90.34000	0.20440	2249.81055	1.16136
1	1351.59985	581.09985	9.92000	90.14999	0.20490	2253.77905	1.15697
1	1351.39990	580.50000	9.91000	90.15999	0.20510	2257.77979	1.15549

AVERAGE VALUES

10- 68- 42	RESISTANCE		SEEBECK VOLTAGE		POWER		TIME		NO. OF DATA	
TIME RANGE	(M OHM)		(MV)		(WATT)		(HRS)			
(HRS)										
0 - 233	14.64692		99.09145		0.16762		54.68840		13	
233 - 1045	11.50230		92.78603		0.18711		440.73438		13	
1045 - 1885	9.91142		88.67349		0.19838		1829.34888		14	
1885 - 2400	9.79444		88.73546		0.20100		2239.11450		9

Figure 7.7.7-10. TELPS Leg Performance Data Normalized to $TH = 1350$ (F) $TC = 520$ (F)

TABLE 7.7.7-10. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 7b- 33		*** NORMALIZED TO TC=520 TH=1350 ***				TIME (HRS)	P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
3	1360.19995	578.89990	13.91000	98.31000	0.17370	3.33333	0.0
3	1337.39990	571.19995	14.01000	98.12999	0.17180	24.39999	0.0
3	1341.29980	576.00000	13.91000	97.98000	0.17250	27.88329	0.0
3	1337.09985	576.00000	13.72000	97.64999	0.17380	47.33330	0.0
3	1335.19995	576.29980	13.69000	97.56999	0.17390	51.33330	0.0
3	1334.59985	576.29980	13.64000	97.51999	0.17430	55.33330	0.0
3	1333.79980	576.29980	13.60000	97.43999	0.17460	59.33330	0.0
3	1333.00000	576.29980	13.58000	97.40999	0.17470	63.33330	0.0
3	1333.19995	576.29980	13.51000	97.34000	0.17530	67.33330	0.0
3	1333.50000	577.00000	13.50000	97.28999	0.17520	71.33330	0.0
3	1333.50000	576.69995	13.46000	97.20000	0.17550	75.33330	0.0
3	1335.79980	578.00000	13.41000	97.15999	0.17600	79.33330	0.0
3	1338.50000	579.59985	13.35000	97.10999	0.17650	85.33330	0.0
3	1323.39990	579.39990	11.65000	92.90999	0.18530	416.77979	0.0
3	1326.50000	583.00000	11.43000	92.87000	0.18870	422.19678	0.0
3	1322.59985	581.50000	11.43000	92.78999	0.18830	424.77979	0.0
3	1321.69995	581.50000	11.36000	92.78000	0.18940	428.77979	0.0
3	1322.29980	581.19995	11.35000	92.81000	0.18970	432.77979	0.0
3	1321.69995	580.50000	11.32000	92.76999	0.19000	436.77979	0.0
3	1324.50000	582.59985	11.28000	92.79999	0.19090	440.77979	0.0
3	1324.79980	592.69995	11.31000	92.79999	0.19030	444.77979	0.0
3	1322.29980	579.19995	11.34000	92.82999	0.19000	448.77979	0.0
3	1322.59985	579.59985	11.37000	92.81000	0.18950	452.77979	0.0
3	1325.69995	580.19995	11.35000	92.85999	0.19000	456.77979	0.0
3	1325.39990	579.69995	11.36000	92.87000	0.18980	460.77979	0.0
3	1324.50000	579.39990	11.36000	92.84000	0.18980	462.77979	0.0
3	1275.50000	521.79980	11.26000	88.76999	0.17500	1797.77979	1.15359
3	1276.59985	523.59985	11.09000	88.75999	0.17760	1799.77979	1.15625
3	1275.19995	524.09985	11.00000	88.75999	0.17900	1803.77979	1.16158
3	1274.89990	523.89990	10.95000	88.78000	0.18000	1807.77979	1.16129
3	1274.00000	521.89990	10.84000	88.70000	0.18140	1811.77979	1.15689
3	1274.29980	521.79980	10.81000	88.73999	0.18210	1815.77979	1.15619
3	1274.00000	522.29980	10.70000	88.75999	0.18400	1819.77979	1.15869
3	1274.00000	522.19995	10.72000	88.78000	0.18380	1823.77979	1.15816
3	1273.79980	522.19995	10.66000	88.78000	0.18490	1831.77979	1.15925
3	1274.59985	523.09985	10.56000	88.81000	0.18670	1851.77979	1.15963
3	1274.29980	522.69995	10.54000	88.76999	0.18690	1855.77979	1.15871
3	1274.59985	523.09985	10.49000	88.78000	0.18780	1859.77979	1.15926
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
3	1274.89990	523.59985	10.45000	88.76999	0.18860	1863.77979	1.16062
3	1274.89990	523.29980	10.42000	88.79999	0.18910	1867.77979	1.15941
3	1296.00000	534.89990	10.58000	88.59999	0.18550	2221.77979	1.14436
3	1295.39990	535.00000	10.27000	88.50000	0.19070	2225.77930	1.14603
3	1294.59985	534.79980	10.20000	88.42000	0.19160	2229.77979	1.14731
3	1294.59985	534.09985	10.10000	88.37000	0.19340	2233.78052	1.14573
3	1294.29980	533.69995	10.02000	88.32999	0.19470	2237.78003	1.14462
3	1294.29980	534.00000	9.98000	88.31000	0.19540	2241.77954	1.14604
3	1292.00000	532.19995	9.88000	88.25999	0.19700	2249.81055	1.14535
3	1294.29980	535.50000	9.87000	88.34999	0.19770	2253.77905	1.15009
3	1294.59985	535.19995	9.84000	88.35999	0.19830	2257.77979	1.14823
3	1299.39990	537.00000	9.84000	88.50999	0.19900	2261.78027	1.14302

AVERAGE VALUES

10- 7B- 33 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
0 - 233	13.63768	97.54681	0.17445	54.68840	13
233 - 1045	11.37768	92.82599	0.18936	440.73438	13
1045 - 1885	10.74928	88.76840	0.18335	1829.34888	14
1885 - 2400	10.05799	88.40085	0.19433	2241.38086	10

Figure 7.7.7-11. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-11. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 7B- 34		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
5	1342.19995	570.19995	13.51000	90.59000	0.15180	3.33333	0.0
5	1342.50000	573.09985	14.46000	97.87000	0.16560	24.39999	0.0
5	1346.59985	577.29980	14.41000	97.76999	0.16580	27.88329	0.0
5	1342.50000	578.89990	14.44000	97.54999	0.16480	47.33330	0.0
5	1339.89990	579.59985	14.29000	97.31999	0.16560	51.33330	0.0
5	1339.89990	579.89990	14.29000	97.28999	0.16560	55.33330	0.0
5	1339.39990	580.50000	14.31000	97.21999	0.16520	59.33330	0.0
5	1338.50000	581.19995	14.35000	97.20000	0.16460	63.33330	0.0
5	1338.79980	582.50000	14.34000	97.12000	0.16440	67.33330	0.0
5	1338.79980	584.39990	14.35000	97.06999	0.16410	71.33330	0.0
5	1338.79980	584.39990	14.35000	97.00999	0.16390	75.33330	0.0
5	1340.50000	585.09985	14.35000	96.98000	0.16380	79.33330	0.0
5	1267.19995	555.69995	9.97000	87.26999	0.19090	1797.77979	1.28379
5	1265.09985	552.59985	9.83000	87.09000	0.19290	1799.77979	1.27918
5	1246.09985	527.79980	9.67000	86.57999	0.19380	1803.77979	1.24791
5	1248.69995	531.09985	9.68000	87.09000	0.19600	1807.77979	1.25160
5	1264.29980	554.09985	9.77000	88.12000	0.19870	1811.77979	1.28692
5	1264.29980	547.50000	9.72000	87.46999	0.19680	1815.77979	1.26397
5	1264.00000	547.39990	9.72000	87.45999	0.19680	1819.77979	1.26478
5	1263.39990	547.09985	9.64000	87.42999	0.19820	1823.77979	1.26484
5	1262.79980	546.29980	9.56000	87.29999	0.19930	1831.77979	1.26379
5	1263.09985	549.79980	9.42000	87.59999	0.20360	1851.77979	1.27569
5	1262.59985	549.09985	9.38000	87.50999	0.20400	1855.77979	1.27420
5	1262.79980	549.50000	9.35000	87.50000	0.20480	1859.77979	1.27442
5	1262.79980	550.00000	9.32000	87.53000	0.20540	1863.77979	1.27657
5	1263.39990	551.19995	9.33000	87.57999	0.20550	1867.77979	1.27878
5	1291.79980	570.59985	10.17000	88.70999	0.19340	2221.77979	1.26820
5	1291.50000	570.39990	9.99000	88.45000	0.19580	2225.77930	1.26813
5	1290.59985	568.39990	10.04000	88.37999	0.19450	2229.77979	1.26381
5	1290.59985	567.39990	9.94000	88.35999	0.19650	2233.78052	1.26042
5	1290.89990	569.29980	9.92000	88.54999	0.19750	2237.78003	1.26603
5	1290.59985	570.00000	9.91000	88.64000	0.19820	2241.77954	1.26889
5	1290.89990	571.09985	9.88000	88.67999	0.19900	2249.81055	1.27238
5	1290.89990	572.19995	9.80000	88.84000	0.20140	2253.77905	1.27549
5	1290.00000	571.69995	9.78000	88.75999	0.20140	2257.77979	1.27630
5	1294.59985	575.79980	9.89000	88.89999	0.19970	2261.78027	1.27767

AVERAGE VALUES

10- 7B- 34					
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)	
0 - 233	14.28749	96.74905	0.16377	52.13466	12
1045 - 1885	9.59713	87.39490	0.19905	1829.34888	14
1885 - 2400	9.93199	88.62688	0.19774	2241.38086	10

Figure 7.7.7-12. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-12. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10- 7B- 35		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
7	1353.89990	568.29980	13.95000	98.37999	0.17350	3.33333	0.0
7	1336.89990	562.09985	14.16000	98.67999	0.17200	24.39999	0.0
7	1302.00000	482.79980	14.39000	99.06999	0.17050	47.33330	0.0
7	1337.69995	564.09985	14.11000	98.48999	0.17180	51.33330	0.0
7	1336.89990	564.09985	14.13000	98.46999	0.17150	55.33330	0.0
7	1335.79980	564.39990	14.17000	98.43999	0.17090	59.33330	0.0
7	1334.39990	564.39990	14.20000	98.43999	0.17050	63.33330	0.0
7	1334.59985	565.69995	14.23000	98.37999	0.17010	67.33330	0.0
7	1335.50000	567.00000	14.23000	98.35999	0.17000	71.33330	0.0
7	1334.89990	566.29980	14.24000	98.31000	0.16970	75.33330	0.0
7	1329.00000	578.69995	12.08000	93.87999	0.18240	416.77979	0.0
7	1331.59985	582.59985	12.01000	93.89000	0.18350	422.19678	0.0
7	1327.09985	580.89990	12.03000	93.85999	0.18310	424.77979	0.0
7	1326.19995	580.89990	12.01000	93.87000	0.18340	428.77979	0.0
7	1326.79980	580.50000	11.99000	93.87000	0.18370	432.77979	0.0
7	1325.89990	579.89990	11.97000	93.85999	0.18390	436.77979	0.0
7	1328.50000	582.00000	11.94000	93.87999	0.18460	440.77979	0.0
7	1328.79980	582.79980	11.91000	93.89999	0.18500	444.77979	0.0
7	1326.79980	579.00000	11.90000	93.87999	0.18520	448.77979	0.0
7	1326.19995	579.00000	11.91000	93.89999	0.18500	452.77979	0.0
9	1294.59985	554.09985	10.00000	90.73999	0.20590	1789.77979	1.20550
9	1297.19995	558.09985	9.91000	90.84000	0.20810	1791.77979	1.21270
9	1298.29980	561.29980	9.93000	90.93999	0.20820	1795.77979	1.21968
9	1295.39990	556.89990	9.91000	90.84000	0.20820	1799.77979	1.21258
9	1292.59985	554.09985	9.86000	90.73999	0.20870	1803.77979	1.21056
9	1293.50000	554.79980	9.85000	90.78999	0.20910	1807.77979	1.21077
11	1182.39990	495.29980	9.44000	85.00000	0.19140	2161.77930	1.32365
11	1182.09985	488.59985	9.25000	84.92000	0.19480	2165.78003	1.29953
11	1181.79980	489.00000	9.22000	84.95000	0.19560	2169.77930	1.30226
11	1181.50000	488.79980	9.20000	84.98000	0.19620	2173.78003	1.30279
11	1182.09985	488.89990	9.19000	85.00999	0.19660	2177.78076	1.30113
11	1183.29980	490.19995	9.17000	85.03000	0.19720	2181.78027	1.30251
11	1147.39990	466.79980	9.66000	83.73999	0.18140	2189.81006	1.33186
11	1180.00000	476.50000	9.07000	84.71999	0.19780	2193.77979	1.26471
11	1180.00000	476.39990	9.06000	84.73999	0.19820	2197.77930	1.26403
11	1180.00000	476.50000	9.07000	84.70000	0.19770	2201.78003	1.26407

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AVERAGE VALUES						
10- 7B- 35	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	14.18099	98.50192	0.17105	51.83994	10	
233 - 1045	11.97499	93.87891	0.18398	434.92139	10	
1045 - 1885	9.90999	90.81490	0.20803	1798.11133	6	
1885 - 2400	9.23299	84.77893	0.19469	2181.38086	10

Figure 7.7.7-13. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-13. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 34		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
9	1365.79980	596.39990	14.30000	97.73000	0.16700	27.88329	0.0
9	1354.39990	598.00000	14.35000	97.84999	0.16680	47.33330	0.0
9	1336.29980	612.19995	11.36000	91.37000	0.18370	416.77979	0.0
9	1336.89990	615.29980	11.35000	91.32999	0.18370	422.19678	0.0
9	1334.39990	613.89990	11.38000	91.32999	0.18330	424.77979	0.0
9	1333.79980	613.89990	11.38000	91.31999	0.18320	428.77979	0.0
9	1333.50000	613.50000	11.39000	91.34999	0.18310	432.77979	0.0
9	1335.19995	614.19995	11.39000	91.37000	0.18320	436.77979	0.0
9	1336.29980	615.29980	11.37000	91.39999	0.18370	440.77979	0.0
9	1336.29980	615.89990	11.34000	91.42999	0.18420	444.77979	0.0
9	1336.29980	613.59985	11.31000	91.45999	0.18490	448.77979	0.0
9	1334.89990	611.89990	11.38000	91.48000	0.18380	452.77979	0.0
9	1335.50000	611.09985	11.38000	91.50000	0.18400	456.77979	0.0
9	1334.59985	610.50000	11.43000	91.51999	0.18310	460.77979	0.0
9	1336.59985	611.09985	11.40000	91.54999	0.18380	462.77979	0.0
11	1264.59985	518.39990	9.28000	85.76999	0.19830	1797.77979	1.16991
11	1263.09985	516.00000	9.27000	85.75000	0.19830	1799.77979	1.16647
11	1262.79980	515.29980	9.25000	85.75999	0.19890	1803.77979	1.16452
11	1263.69995	516.29980	9.25000	85.78000	0.19880	1807.77979	1.16530
11	1263.69995	516.50000	9.28000	85.78999	0.19830	1811.77979	1.16578
11	1264.29980	517.09985	9.27000	85.81999	0.19860	1815.77979	1.16686
11	1267.39990	519.19995	9.29000	85.93999	0.19880	1819.77979	1.16530
11	1267.19995	519.19995	9.24000	85.98999	0.20000	1823.77979	1.16618
11	1266.59985	519.19995	9.23000	86.00000	0.20020	1831.77979	1.16735
11	1267.39990	520.69995	9.26000	86.12000	0.20020	1851.77979	1.16939
11	1267.19995	520.19995	9.23000	86.12999	0.20080	1855.77979	1.16812
11	1267.39990	520.69995	9.25000	86.17000	0.20070	1859.77979	1.16958
11	1268.00000	521.50000	9.26000	86.18999	0.20060	1863.77979	1.17036
11	1269.69995	523.39990	9.30000	86.25000	0.19990	1867.77979	1.17175
13	1295.19995	521.39990	9.30000	87.17999	0.20440	2221.77979	1.10846
13	1292.89990	517.29980	9.13000	87.10999	0.20790	2225.77930	1.10175
13	1292.00000	516.69995	9.13000	87.03000	0.20740	2229.77979	1.10202
13	1291.19995	516.09985	9.11000	87.01999	0.20790	2233.78052	1.10233
13	1292.29980	517.19995	9.12000	87.03999	0.20780	2237.78003	1.10297
13	1292.29980	517.79980	9.11000	87.01999	0.20780	2241.77954	1.10473
13	1322.89990	550.19995	9.29000	88.17999	0.20920	2249.81055	1.12898
13	1322.59985	550.00000	9.27000	88.12000	0.20930	2253.77905	1.12891
13	1322.89990	551.19995	9.28000	88.12000	0.20910	2261.78027	1.13211

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	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AVERAGE VALUES						
10-20A- 34						
TIME RANGE	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
(HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	14.32500	97.78999	0.16690	37.60829	2	
233 - 1045	11.37384	91.41605	0.18367	440.73438	13	
1045 - 1885	9.26142	85.96133	0.19946	1829.34888	14	
1885 - 2400	9.19333	87.42432	0.20787	2239.55884	9

Figure 7.7.7-14. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-14. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 35			*** NORMALIZED TO TC=520 TH=1350 ***				
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	P. FACTOR
11	1344.69995	560.19995	14.44000	98.78999	0.16900	3.33333	0.0
11	1334.39990	561.19995	14.39000	98.68999	0.16920	27.88329	0.0
15	1339.39990	585.69995	11.66000	92.89999	0.18500	422.19678	0.0
15	1336.89990	584.69995	11.68000	92.87999	0.18470	424.77979	0.0
15	1335.79980	585.09985	11.64000	92.90999	0.18530	428.77979	0.0
15	1335.19995	584.69995	11.64000	92.89999	0.18540	432.77979	0.0
15	1336.89990	587.09985	11.62000	92.89999	0.18570	444.77979	0.0
15	1335.79980	585.50000	11.60000	92.90999	0.18600	448.77979	0.0
15	1335.19995	584.00000	11.58000	92.89999	0.18630	452.77979	0.0
15	1335.19995	583.69995	11.59000	92.92999	0.18630	456.77979	0.0
15	1334.89990	583.79980	11.62000	92.90999	0.18570	460.77979	0.0
13	1290.89990	509.00000	9.69000	88.71999	0.20320	1795.77979	0.0
13	1291.50000	510.39990	9.68000	88.75999	0.20350	1797.77979	0.0
13	1290.89990	510.19995	9.66000	88.85999	0.20440	1801.77979	0.0
13	1290.00000	510.00000	9.64000	88.81999	0.20470	1805.77979	0.0
13	1289.50000	509.00000	9.63000	88.76999	0.20450	1809.77979	0.0
13	1289.50000	509.29980	9.62000	88.75999	0.20480	1813.77979	0.0
13	1292.29980	511.69995	9.61000	88.84999	0.20540	1817.77979	0.0
13	1292.00000	512.00000	9.60000	88.82999	0.20540	1821.77979	0.0
13	1291.50000	512.09985	9.60000	88.81000	0.20550	1829.77979	0.0
13	1291.50000	512.59985	9.60000	88.78000	0.20530	1849.77979	0.0
13	1290.89990	512.09985	9.58000	88.76999	0.20550	1853.77979	0.0
13	1291.19995	512.39990	9.60000	88.76999	0.20520	1857.77979	0.0
13	1291.50000	513.00000	9.58000	88.75000	0.20560	1861.77979	0.0
13	1292.59985	512.89990	9.58000	88.82999	0.20580	1865.77979	0.0
19	1284.09985	543.39990	8.73000	87.70000	0.22030	2219.78052	1.18859

AVERAGE VALUES

10-20A- 35						
TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA	
0 - 233	14.41499	98.73999	0.16910	15.60831	2	✓
233 - 1045	11.62555	92.90437	0.18560	441.28159	9	
1045 - 1885	9.61928	88.79128	0.20491	1827.34888	14	
1885 - 2400	8.73000	87.70000	0.22030	2219.78052	1

Figure 7.7.7-15. TELPS Leg Performance Data Normalized to TH = 1350 (F) TC = 520 (F)

TABLE 7.7.7-15. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 36		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
13	1345.00000	551.50000	11.55000	95.09999	0.19570	3.33333	0.0
13	1341.29980	556.29980	14.29000	98.06000	0.16820	24.39999	0.0
13	1336.89990	556.59985	14.27000	97.98000	0.16820	27.88329	0.0
13	1334.09985	556.59985	14.20000	97.81000	0.16840	47.33330	0.0
13	1338.29980	559.50000	14.14000	97.76999	0.16900	51.33330	0.0
13	1338.00000	559.89990	14.10000	97.71999	0.16930	55.33330	0.0
13	1337.09985	559.89990	14.11000	97.62000	0.16890	59.33330	0.0
13	1337.09985	560.50000	14.08000	97.56999	0.16900	63.33330	0.0
13	1336.89990	561.19995	14.07000	97.50999	0.16890	67.33330	0.0
13	1336.89990	561.79980	14.07000	97.45999	0.16880	71.33330	0.0
13	1336.59985	562.50000	14.05000	97.42000	0.16890	75.33330	0.0
13	1336.89990	563.39990	14.04000	97.70000	0.16900	79.33330	0.0
13	1336.59985	564.69995	14.02000	97.25999	0.16860	85.33330	0.0
19	1323.69995	591.19995	10.94000	92.25999	0.19450	428.77979	0.0
19	1322.00000	593.79980	10.76000	92.15999	0.19730	432.77979	0.0
19	1321.19995	597.69995	10.65000	92.09999	0.19910	436.77979	0.0
19	1320.59985	598.00000	10.68000	92.09999	0.19850	440.77979	0.0
19	1320.29980	602.19995	10.67000	92.09999	0.19870	444.77979	0.0
19	1318.59985	602.50000	10.61000	92.01999	0.19950	448.77979	0.0
19	1318.59985	602.50000	10.61000	92.01999	0.19950	452.77979	0.0
19	1315.29980	602.39990	10.55000	91.92999	0.20030	456.77979	0.0
19	1313.59985	603.00000	10.47000	91.82999	0.20140	460.77979	0.0
19	1313.00000	603.59985	10.43000	91.79999	0.20200	462.77979	0.0

AVERAGE VALUES

AVERAGE VALUES						
10-20A- 36	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	NO. OF DATA	
TIME RANGE (HRS)	(M OHM)	(MV)	(WATT)	(HRS)		
0 - 233	13.92230	97.45988	0.17084	54.68840	13	
233 - 1045	10.63699	92.03186	0.19908	446.57959	10

Figure 7.7.7-16. TELPS Leg Performance Data Normalized to $TH = 1350$ (F) $TC = 520$ (F)

TABLE 7.7.7-16. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-20A- 37		*** NORMALIZED TO TC=520 TH=1350 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
19	1284.29980	548.09985	11.19000	90.64999	0.18360	1334.82983	1.21268
19	1205.50000	446.09985	10.79000	88.35999	0.18090	1336.82983	1.10507
19	1273.50000	500.59985	10.88000	90.04999	0.18630	1340.82983	0.0
21	1289.79980	521.50000	10.25000	88.40999	0.19050	1693.99976	1.11993
21	1292.00000	523.59985	10.15000	88.53000	0.19310	1698.00024	1.12072
21	1291.50000	523.50000	10.12000	88.53999	0.19370	1702.00098	1.12225
21	1290.89990	522.79980	10.11000	88.59000	0.19420	1706.00049	1.12125
21	1290.89990	522.59985	10.12000	88.62999	0.19400	1710.00000	1.12074
21	1290.89990	523.39990	10.07000	88.78000	0.19570	1714.00049	1.12278
21	1291.50000	527.89990	10.19000	88.56999	0.19240	1722.03052	1.13443
21	1290.00000	522.59985	10.15000	88.48999	0.19290	1726.00024	1.12282
21	1290.00000	522.50000	10.17000	88.51999	0.19260	1730.00098	1.12238

AVERAGE VALUES

10-20A- 37 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
1045 - 1885	10.34916	88.84320	0.19082	1617.87622	12

7.7.8 PERFORMANCE TEST DATA

LOT 10 - P-TYPE

$T_H = 1090^{\circ}\text{F}$

$T_C = 520^{\circ}\text{F}$

Control Sample: Batch 26B, Sample 40

Total Time (Hr): 2723

Figure 7.7.8-1. TELPS Leg Performance Data Normalized to $T_H = 1090$ (F) $T_C = 520$ (F)

10 - 26 B - 40

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH

10-26B- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(MATT)	(HRS)	
17	1092.39990	548.29980	11.90000	65.28999	0.08960	10.55000	0.0
17	1104.39990	550.09985	11.63000	64.81000	0.09030	14.55000	0.0
17	1109.59985	549.29980	11.51000	64.59999	0.09060	16.54999	0.0
17	1113.50000	540.19995	11.42000	64.54999	0.09120	18.54999	0.0
17	1116.89990	545.89990	11.32000	64.28000	0.09130	22.54999	0.0
17	1116.59985	543.39990	11.26000	64.17000	0.09140	26.54999	0.0
17	1116.89990	543.50000	11.20000	64.07999	0.09170	30.54999	0.0
17	1116.19995	542.39990	11.13000	63.98000	0.09200	34.54999	0.0
17	1081.79980	417.29980	11.24000	63.71999	0.09030	41.38329	0.0
17	1085.50000	412.29980	11.21000	63.62999	0.09030	42.54999	0.0
17	1045.69995	496.00000	10.92000	64.43999	0.09510	46.18329	0.0
17	1072.19995	521.29980	10.87000	64.20999	0.09480	60.89999	0.0
17	1074.59985	522.39990	10.89000	64.17999	0.09450	63.48329	0.0
17	1074.79980	521.69995	10.89000	64.15999	0.09450	67.38329	0.0
17	1075.09985	521.19995	10.89000	64.12999	0.09440	71.50000	0.0
17	1075.29980	521.19995	10.89000	64.09999	0.09430	75.51669	0.0
17	1075.19995	521.09985	10.89000	64.06000	0.09420	79.51669	0.0
17	1075.29980	521.29980	10.87000	64.01999	0.09420	83.50000	0.0
17	1076.19995	530.59985	10.99000	63.84000	0.09270	199.03299	0.0
17	1074.59985	527.59985	10.98000	63.84999	0.09280	203.01700	0.0
17	1074.39990	527.00000	10.98000	63.81999	0.09280	207.01700	0.0
17	1076.50000	517.89990	10.83000	63.81999	0.09400	211.86699	0.0
17	1074.69995	527.29980	10.82000	63.85999	0.09420	215.18300	0.0
17	1069.59985	478.39990	11.04000	60.48000	0.08290	219.00000	0.0
17	1068.09985	472.79980	11.09000	60.56000	0.08270	223.00000	0.0
17	1068.09985	474.50000	11.09000	60.51999	0.08250	227.00000	0.0
17	1072.69995	485.89990	11.10000	60.73000	0.08310	233.00000	0.0
17	1072.69995	485.89990	11.10000	60.73000	0.08310	233.00000	0.0
17	1071.89990	489.39990	11.08000	61.34000	0.08490	241.00000	0.0
17	1075.39990	492.09985	11.00000	61.03999	0.08470	251.00000	0.0
17	1072.89990	501.89990	10.97000	61.34999	0.08580	259.00000	0.0
17	1086.29980	510.19995	10.89000	60.79999	0.08480	263.00000	0.0
17	1084.19995	512.79980	10.78000	60.67999	0.08540	267.00000	0.0
17	1086.59985	511.50000	10.74000	60.37999	0.08480	271.00000	0.0
17	1087.50000	510.19995	10.73000	60.01999	0.08390	275.00000	0.0
17	1088.50000	509.89990	10.71000	59.65999	0.08310	279.00000	0.0
17	1088.79980	509.19995	10.63000	59.42000	0.08300	283.00000	0.0
17	1088.79980	509.19995	10.66000	59.54999	0.08320	287.00000	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

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FIX.	10-26B- 40	*** NORMALIZED TO TC=520 TH=1090 ***				TIME	P. FACTOR
	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)		
17	1088.79980	508.89990	10.67000	59.34000	0.08250	291.00000	0.0
17	1089.09985	508.59985	10.60000	59.17999	0.08260	295.00000	0.0
17	1089.39990	508.59985	10.65000	59.12999	0.08210	299.00000	0.0
17	1049.89990	533.09985	7.84000	54.23000	0.09380	333.00000	0.0
17	1077.39990	530.79980	7.42000	53.70000	0.09720	341.00000	0.0
17	1077.39990	530.19995	7.36000	53.54999	0.09730	345.00000	0.0
17	1077.39990	530.79980	7.32000	53.48999	0.09770	349.00000	0.0
17	1076.79980	530.79980	7.36000	53.57999	0.09760	353.00000	0.0
17	1082.59985	534.09985	7.28000	53.56000	0.09850	357.00000	0.0
17	1081.09985	519.89990	7.24000	54.67999	0.10320	387.00000	0.0
17	1080.50000	519.19995	7.64000	54.71999	0.09800	408.06689	0.0
17	1078.29980	534.69995	7.62000	54.76999	0.09840	411.54980	0.0
17	1074.89990	530.50000	7.45000	54.25999	0.09880	435.00000	0.0
17	1074.00000	533.69995	7.52000	54.21999	0.09770	439.00000	0.0
17	1072.19995	533.09985	7.54000	54.07999	0.09700	451.00000	0.0
17	1071.89990	533.39990	7.59000	53.98999	0.09600	455.00000	0.0
17	1071.89990	533.39990	7.62000	53.93999	0.09550	459.00000	0.0
17	1070.89990	532.79980	7.64000	53.92000	0.09510	463.00000	0.0
17	1070.29980	533.09985	7.69000	54.03000	0.09490	469.00000	0.0
17	1082.59985	534.09985	7.63000	53.60999	0.09420	497.31689	0.0
17	1083.50000	540.50000	7.62000	53.73000	0.09470	500.09985	0.0
17	1083.19995	540.50000	7.55000	53.85999	0.09610	504.09985	0.0
17	1082.59985	540.19995	7.53000	53.89999	0.09640	508.09985	0.0
17	1082.89990	540.19995	7.50000	53.84999	0.09670	510.09985	0.0
17	1080.19995	524.69995	7.61000	53.60999	0.09440	516.69995	0.0
17	1083.89990	525.29980	7.51000	53.50000	0.09520	520.09985	0.0
17	1083.19995	524.39990	7.53000	53.48999	0.09500	524.09985	0.0
17	1082.29980	523.39990	7.50000	53.42000	0.09510	528.09985	0.0
17	1082.29980	523.39990	7.44000	53.43999	0.09590	532.09985	0.0
17	1082.00000	522.79980	7.48000	53.39999	0.09530	533.39990	0.0
17	1076.29980	504.50000	7.48000	54.26999	0.09850	550.09985	0.0
17	1075.19995	513.69995	7.53000	54.43999	0.09840	554.09985	0.0
17	1076.00000	518.59985	7.50000	54.34000	0.09840	558.09985	0.0
17	1081.59985	522.69995	7.42000	53.96999	0.09810	562.09985	0.0
17	1081.79980	525.79980	7.47000	54.03000	0.09770	566.09985	0.0
17	1081.19995	525.69995	7.44000	53.90999	0.09770	570.09985	0.0
17	1080.00000	525.09985	7.44000	53.81000	0.09730	574.09985	0.0
17	1079.09985	520.39990	7.45000	54.01999	0.09790	578.09985	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

1U-26B- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
17	1077.39990	513.39990	7.47000	53.92000	0.09730	582.09985	0.0
17	1077.19995	514.19995	7.45000	53.82999	0.09720	584.09985	0.0
17	1076.19995	514.39990	7.46000	53.75000	0.09670	590.09985	0.0
17	1075.19995	513.39990	7.46000	53.73999	0.09680	594.09985	0.0
17	1074.59985	513.19995	7.45000	53.68999	0.09680	598.09985	0.0
17	1074.00000	512.89990	7.48000	53.73999	0.09660	602.09985	0.0
17	1073.00000	512.29980	7.45000	53.73999	0.09700	606.09985	0.0
17	1072.69995	512.59985	7.48000	53.79999	0.09670	610.09985	0.0
17	1072.19995	511.89990	7.48000	53.67999	0.09620	614.09985	0.0
17	1073.00000	512.59985	7.45000	53.57999	0.09640	618.09985	0.0
17	1070.29980	511.19995	7.57000	53.18999	0.09370	662.36694	0.0
17	1088.79980	521.00000	7.26000	54.89000	0.10380	667.00000	0.0
17	1082.19995	516.19995	7.33000	54.92000	0.10290	671.00000	0.0
17	1085.00000	519.59985	7.28000	54.89999	0.10340	675.00000	0.0
17	1083.59985	518.59985	7.30000	54.89999	0.10320	679.00000	0.0
17	1082.50000	517.89990	7.30000	54.90999	0.10320	683.00000	0.0
17	1080.79980	518.09985	7.30000	54.92000	0.10320	687.06689	0.0
17	1088.29980	521.59985	7.26000	54.84000	0.10350	691.28294	0.0
17	1089.00000	524.19995	7.27000	54.84000	0.10340	695.00000	0.0
17	1085.89990	521.59985	7.27000	54.84999	0.10340	700.33274	0.0
17	1080.69995	509.79980	7.31000	54.78999	0.10270	719.00000	0.0
17	1080.09985	509.69995	7.31000	54.79999	0.10270	723.00000	0.0
17	1081.19995	510.50000	7.31000	54.79999	0.10270	727.00000	0.0
17	1082.00000	512.29980	7.29000	54.78999	0.10300	731.00000	0.0
17	1080.50000	513.19995	7.33000	54.84000	0.10250	735.00000	0.0
17	1082.89990	522.00000	7.27000	54.70000	0.10290	739.00000	0.0
17	1092.09985	526.50000	7.13000	54.73000	0.10500	743.00000	0.0
17	1086.00000	523.00000	7.15000	54.81000	0.10490	747.00000	0.0
17	1084.29980	522.00000	7.17000	54.82999	0.10480	751.00000	0.0
17	1083.19995	521.29980	7.17000	54.84000	0.10480	755.00000	0.0
17	1083.50000	521.19995	7.15000	54.82999	0.10510	758.26685	0.0
17	1079.89990	525.09985	7.19000	54.90999	0.10480	765.00000	0.0
17	1077.19995	519.00000	7.23000	54.89000	0.10420	767.00000	0.0
17	1073.79980	517.29980	7.25000	54.92999	0.10410	771.00000	0.0
17	1073.79980	517.29980	7.25000	54.92999	0.10410	771.00000	0.0
17	1090.09985	529.00000	7.10000	54.75000	0.10550	779.00000	0.0
17	1089.50000	530.39990	7.11000	54.75999	0.10550	783.00000	0.0
17	1085.89990	526.59985	7.13000	54.76999	0.10520	787.00000	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

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	10-26B- 40		*** NORMALIZED TO TC=520 TH=1090 ***				
	FIX. HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
17	1085.09985	523.89990	7.14000	54.73999	0.10490	791.00000	0.0
17	1083.19995	524.29980	7.15000	54.78000	0.10490	795.00000	0.0
17	1082.69995	522.50000	7.15000	54.76999	0.10480	799.00000	0.0
17	1082.29980	522.39990	7.17000	54.90999	0.10510	803.00000	0.0
17	1082.50000	522.59985	7.16000	54.76999	0.10470	807.00000	0.0
17	1080.89990	527.00000	7.18000	54.81999	0.10460	811.00000	0.0
17	1085.19995	532.09985	7.13000	54.81000	0.10530	814.58276	0.0
17	1089.19995	518.19995	7.11000	54.50999	0.10450	855.00000	0.0
17	1085.39990	518.19995	7.15000	54.53000	0.10390	860.41699	0.0
17	1084.79980	519.50000	7.13000	54.62999	0.10460	863.00000	0.0
17	1085.69995	531.50000	7.10000	54.75999	0.10570	867.00000	0.0
17	1086.29980	532.09985	7.09000	54.73000	0.10560	871.00000	0.0
17	1085.39990	530.19995	7.11000	54.73999	0.10540	875.00000	0.0
17	1086.19995	526.19995	7.07000	54.60999	0.10540	879.00000	0.0
17	1087.69995	529.69995	7.08000	54.59999	0.10530	883.00000	0.0
17	1086.59985	524.79980	7.08000	54.56000	0.10510	887.00000	0.0
17	1086.19995	523.39990	7.09000	54.56999	0.10500	891.00000	0.0
17	1084.69995	520.89990	7.09000	54.56999	0.10500	895.00000	0.0
17	1084.09985	520.29980	7.10000	54.56000	0.10480	899.00000	0.0
17	1083.89990	520.19995	7.10000	54.56999	0.10490	901.00000	0.0
17	1082.69995	521.59985	7.09000	54.39999	0.10430	1051.00000	0.0
17	1083.09985	522.59985	7.07000	54.39999	0.10460	1055.39990	0.0
17	1082.39990	521.19995	7.10000	54.37999	0.10410	1059.00000	0.0
17	1082.29980	521.19995	7.09000	54.39000	0.10430	1063.00000	0.0
17	1082.19995	521.29980	7.08000	54.37999	0.10440	1067.00000	0.0
17	1082.69995	522.19995	7.08000	54.35999	0.10440	1075.00000	0.0
17	1082.79980	522.69995	7.05000	54.37999	0.10490	1079.00000	0.0
17	1082.00000	521.39990	7.08000	54.37000	0.10440	1083.00000	0.0
17	1081.29980	520.39990	7.08000	54.37999	0.10440	1087.00000	0.0
17	1081.29980	520.39990	7.09000	54.37000	0.10430	1091.00000	0.0
17	1080.89990	520.19995	7.08000	54.37000	0.10430	1095.00000	0.0
17	1081.09985	519.89990	7.09000	54.35999	0.10420	1099.00000	0.0
17	1081.39990	519.69995	7.08000	54.31999	0.10420	1100.00000	0.0
17	1081.29980	519.59985	7.08000	54.32999	0.10420	1102.00000	0.0
17	1080.39990	519.69995	7.09000	54.28999	0.10400	1139.28320	0.0
17	1081.29980	520.29980	7.10000	54.28999	0.10380	1142.00000	0.0
17	1081.69995	520.59985	7.08000	54.28000	0.10410	1144.00000	0.0
17	1081.09985	520.69995	7.12000	54.32999	0.10360	1146.00000	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

10-268- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(H OHM)	(MV)	(WATT)	(HRS)	
17	1080.29980	519.69995	7.09000	54.28999	0.10390	1155.00000	0.0
17	1080.29980	520.39990	7.09000	54.28999	0.10390	1159.00000	0.0
17	1080.59985	520.19995	7.09000	54.28999	0.10390	1163.00000	0.0
17	1079.59985	520.00000	7.10000	54.29999	0.10390	1167.00000	0.0
17	1080.19995	519.89990	7.10000	54.28999	0.10370	1171.00000	0.0
17	1080.69995	520.79980	7.06000	54.29999	0.10440	1179.00000	0.0
17	1081.00000	520.79980	7.07000	54.28999	0.10420	1179.00000	0.0
17	1080.89990	520.59985	7.08000	54.28999	0.10410	1183.00000	0.0
17	1080.69995	520.39990	7.07000	54.28000	0.10420	1187.00000	0.0
17	1080.19995	520.19995	7.09000	54.26999	0.10390	1190.14990	0.0
17	1080.19995	520.19995	7.06000	54.28000	0.10430	1195.00000	0.0
17	1081.29980	521.29980	7.06000	54.23999	0.10420	1199.00000	0.0
17	1081.09985	521.79980	7.06000	54.25999	0.10420	1203.00000	0.0
17	1080.59985	520.59985	7.07000	54.23999	0.10400	1207.00000	0.0
17	1080.69995	520.69995	7.06000	54.23999	0.10410	1211.00000	0.0
17	1080.59985	520.29980	7.08000	54.23999	0.10390	1214.52979	0.0
17	1079.39990	520.39990	7.08000	54.25000	0.10390	1219.00000	0.0
17	1081.29980	521.79980	7.06000	54.23000	0.10410	1223.00000	0.0
17	1080.19995	521.00000	7.07000	54.23000	0.10400	1227.00000	0.0
17	1080.59985	520.89990	7.07000	54.21999	0.10400	1231.09985	0.0
17	1080.59985	521.09985	7.07000	54.20999	0.10400	1235.00000	0.0
17	1080.79980	521.29980	7.06000	54.20999	0.10400	1239.00000	0.0
17	1081.00000	521.89990	7.05000	54.20000	0.10420	1243.32983	0.0
17	1077.59985	516.69995	7.10000	54.20000	0.10340	1244.00000	0.0
17	1081.89990	522.89990	7.06000	54.17999	0.10400	1251.00000	0.0
17	1081.29980	522.09985	7.06000	54.18999	0.10400	1255.00000	0.0
17	1080.89990	521.39990	7.05000	54.18999	0.10410	1259.00000	0.0
17	1080.89990	521.39990	7.07000	54.17000	0.10380	1263.00000	0.0
17	1081.00000	521.00000	7.08000	54.17000	0.10360	1269.44995	0.0
17	1081.00000	521.19995	7.05000	54.17000	0.10410	1275.00000	0.0
17	1081.39990	521.79980	7.04000	54.15999	0.10410	1279.00000	0.0
17	1081.19995	522.09985	7.04000	54.15999	0.10410	1283.00000	0.0
17	1081.00000	522.00000	7.05000	54.15999	0.10400	1287.00000	0.0
17	1081.50000	523.39990	7.05000	54.17000	0.10410	1291.00000	0.0
17	1081.59985	523.59985	7.05000	54.17000	0.10400	1295.00000	0.0
17	1082.59985	528.50000	7.02000	54.20000	0.10460	1300.00000	0.0
17	1080.29980	522.39990	7.06000	54.15999	0.10380	1310.57983	0.0
17	1081.89990	524.79980	7.03000	54.10999	0.10410	1315.57983	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

7-284	10-26B- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)		
17	1080.19995	522.19995	7.04000	54.10999	0.10390	1319.00000	0.0	
17	1079.79980	521.50000	7.04000	54.10999	0.10390	1323.00000	0.0	
17	1080.69995	520.59985	7.04000	54.09000	0.10390	1327.00000	0.0	
17	1081.59985	522.59985	7.03000	54.09000	0.10400	1331.00000	0.0	
17	1081.59985	523.59985	7.03000	54.10999	0.10410	1335.00000	0.0	
17	1082.00000	525.19995	7.03000	54.10999	0.10410	1339.00000	0.0	
17	1082.09985	524.39990	7.03000	54.12999	0.10420	1342.75000	0.0	
17	1082.39990	523.59985	7.04000	54.12000	0.10410	1347.00000	0.0	
17	1082.39990	523.89990	7.04000	54.12999	0.10410	1351.00000	0.0	
17	1082.69995	524.50000	7.02000	54.12000	0.10430	1355.00000	0.0	
17	1082.69995	524.69995	7.08000	54.10999	0.10340	1359.00000	0.0	
17	1082.39990	525.00000	7.02000	54.06000	0.10420	1363.00000	0.0	
17	1082.69995	525.89990	7.03000	54.06000	0.10400	1367.00000	0.0	
17	1081.00000	521.69995	7.02000	54.03000	0.10390	1387.00000	0.0	
17	1079.89990	521.79980	7.05000	54.09999	0.10380	1391.00000	0.0	
17	1078.89990	521.19995	7.07000	54.12000	0.10360	1395.00000	0.0	
17	1079.59985	521.19995	7.04000	54.07999	0.10380	1399.00000	0.0	
17	1080.79980	525.00000	7.03000	54.12000	0.10410	1403.00000	0.0	
17	1080.79980	525.00000	7.01000	54.10999	0.10450	1407.00000	0.0	
17	1083.59985	524.50000	6.99000	53.98999	0.10420	1411.00000	0.0	
17	1083.69995	524.19995	6.99000	53.96999	0.10420	1419.00000	0.0	
17	1083.59985	525.00000	6.98000	53.98000	0.10440	1423.00000	0.0	
17	1082.89990	524.29980	7.00000	53.98000	0.10410	1427.00000	0.0	
17	1083.29980	524.19980	7.00000	53.98000	0.10410	1431.00000	0.0	
17	1083.09985	524.59985	6.98000	53.96999	0.10430	1435.00000	0.0	
17	1083.09985	525.09985	6.97000	53.96999	0.10450	1440.31982	0.0	
17	1083.00000	524.59985	6.99000	53.96999	0.10410	1443.00000	0.0	
17	1083.69995	524.69995	6.98000	53.95000	0.10430	1447.00000	0.0	
17	1083.39990	524.79980	6.98000	53.95999	0.10430	1451.00000	0.0	
17	1083.00000	525.69995	6.98000	53.98000	0.10450	1455.00000	0.0	
17	1083.39990	523.09985	6.96000	53.92999	0.10440	1457.00000	0.0	
17	1085.59985	526.29980	6.97000	53.92999	0.10440	1459.00000	0.0	
17	1088.00000	525.29980	6.92000	53.87999	0.10480	1487.00000	0.0	
17	1086.50000	517.89990	6.95000	53.81000	0.10420	1491.00000	0.0	
17	1086.29980	516.39990	6.93000	53.79999	0.10430	1495.00000	0.0	
17	1085.39990	515.00000	6.92000	53.79999	0.10450	1499.00000	0.0	
17	1087.19995	514.39990	6.94000	53.79999	0.10450	1503.00000	0.0	
17	1087.19995	514.69995	6.94000	53.79999	0.10450	1507.00000	0.0	

TABLE 7.7.8-1 TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

10-268- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(Ω)	(mV)	(mW)	(mS)	
17	1087.50000	516.79980	6.94000	53.75999	0.10400	1511.00000	0.0
17	1086.59985	514.89990	6.95000	53.75000	0.10390	1515.00000	0.0
17	1086.39990	514.39990	6.95000	53.75000	0.10400	1519.00000	0.0
17	1085.79980	513.69995	6.96000	53.73999	0.10370	1523.00000	0.0
17	1087.79980	515.19995	6.94000	53.71999	0.10400	1527.00000	0.0
17	1088.19995	515.69995	6.93000	53.70999	0.10410	1529.00000	0.0
17	1086.89990	515.79980	6.95000	53.71999	0.10390	1536.06982	0.0
17	1086.00000	513.19995	6.95000	53.70000	0.10380	1550.37988	0.0
17	1086.00000	513.00000	6.94000	53.67999	0.10380	1555.00000	0.0
17	1087.39990	515.09985	6.95000	52.98999	0.10100	1560.09985	0.0
17	1087.39990	514.59985	6.96000	52.92000	0.10060	1563.00000	0.0
17	1087.29980	514.19995	6.94000	52.84999	0.10060	1567.00000	0.0
17	1087.39990	513.89990	6.95000	53.03999	0.10120	1571.00000	0.0
17	1087.19995	513.89990	6.94000	52.93999	0.10100	1575.00000	0.0
17	1087.79980	514.50000	6.94000	53.03000	0.10130	1579.00000	0.0
17	1087.79980	514.69995	6.92000	53.62000	0.10390	1583.00000	0.0
17	1088.00000	515.29980	6.91000	53.64000	0.10420	1587.00000	0.0
17	1088.00000	513.89990	6.90000	53.62999	0.10420	1591.00000	0.0
17	1087.50000	514.19995	6.91000	53.62999	0.10410	1595.00000	0.0
17	1087.79980	514.29980	6.91000	53.62999	0.10400	1599.00000	0.0
17	1088.00000	514.50000	6.90000	53.62999	0.10420	1603.00000	0.0
17	1088.19995	512.89990	6.90000	53.59000	0.10400	1607.00000	0.0
17	1087.50000	512.00000	6.90000	53.59999	0.10410	1611.00000	0.0
17	1088.19995	512.29980	6.91000	53.59000	0.10390	1615.00000	0.0
17	1088.19995	512.00000	6.90000	53.57999	0.10400	1619.00000	0.0
17	1088.19995	512.09985	6.90000	53.57999	0.10410	1623.00000	0.0
17	1088.79980	513.39990	6.89000	53.59000	0.10410	1627.00000	0.0
17	1089.09985	513.29980	6.90000	53.59000	0.10410	1631.00000	0.0
17	1088.89990	512.50000	6.89000	53.59000	0.10420	1635.00000	0.0
17	1090.09985	513.59985	6.89000	53.57999	0.10420	1651.00000	0.0
17	1091.00000	515.19995	6.88000	53.56999	0.10430	1655.00000	0.0
17	1091.79980	515.50000	6.87000	53.54999	0.10440	1659.00000	0.0
17	1090.89990	514.09985	6.87000	53.54999	0.10440	1663.00000	0.0
17	1090.59985	514.00000	6.87000	53.59999	0.10450	1667.00000	0.0
17	1091.39990	515.09985	6.86000	53.56000	0.10460	1671.00000	0.0
17	1092.29980	515.59985	6.83000	53.54999	0.10490	1675.00000	0.0
17	1091.79980	514.09985	6.89000	53.56000	0.10410	1679.76978	0.0
17	1094.89990	530.00000	6.82000	53.70000	0.10560	1683.00000	0.0

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TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

7-236	10-268- 40		*** NORMALIZED TO TC=520 TH=1090 ***			TIME	P. FACTOR
	FIX. HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER		
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
17	1094.59985	530.29980	6.83000	53.73999	0.10570	1687.00000	0.0
17	1094.59985	529.39990	6.82000	53.71999	0.10580	1691.00000	0.0
17	1094.29980	528.69995	6.84000	53.71999	0.10550	1695.00000	0.0
17	1095.00000	528.00000	6.81000	53.64999	0.10570	1699.00000	0.0
17	1093.69995	519.69995	6.83000	53.62000	0.10530	1703.00000	0.0
17	1094.89990	518.59985	6.81000	53.53999	0.10520	1707.00000	0.0
17	1093.09985	515.59985	6.83000	53.53999	0.10490	1711.00000	0.0
17	1092.69995	514.69995	6.82000	53.54999	0.10510	1715.00000	0.0
17	1094.50000	516.79980	6.83000	53.51999	0.10490	1719.07983	0.0
17	1094.29980	516.19995	6.82000	53.56000	0.10520	1723.00000	0.0
17	1095.19995	518.09985	6.80000	53.56000	0.10550	1727.00000	0.0
17	1095.59985	517.09985	6.80000	53.50999	0.10530	1729.00000	0.0
17	1094.89990	516.29980	6.81000	53.54999	0.10530	1732.12988	0.0
17	1097.59985	518.29980	6.75000	53.46999	0.10590	1749.00000	0.0
17	1098.29980	519.29980	6.73000	53.46999	0.10610	1751.00000	0.0
17	1097.59985	518.19995	6.73000	53.48000	0.10620	1755.00000	0.0
17	1097.29980	516.50000	6.73000	53.42000	0.10600	1759.00000	0.0
17	1097.09985	516.29980	6.73000	53.40999	0.10600	1763.00000	0.0
17	1097.79980	516.19995	6.78000	53.64999	0.10620	1771.00000	0.0
17	1099.19995	517.79980	6.78000	53.70000	0.10640	1775.00000	0.0
17	1099.19995	518.00000	6.78000	53.67999	0.10630	1779.00000	0.0
17	1099.79980	519.09985	6.78000	53.68999	0.10630	1783.00000	0.0
17	1098.89990	517.79980	6.77000	53.67000	0.10640	1787.00000	0.0
17	1099.50000	518.69995	6.78000	53.67000	0.10630	1791.00000	0.0
17	1099.79980	518.59985	6.77000	53.67000	0.10640	1795.00000	0.0
17	1100.39990	519.39990	6.77000	53.70000	0.10640	1799.00000	0.0
17	1101.29980	519.39990	6.75000	53.65999	0.10660	1803.00000	0.0
17	1101.59985	518.29980	6.77000	53.67000	0.10640	1807.00000	0.0
17	1101.59985	518.50000	6.77000	53.67999	0.10640	1811.00000	0.0
17	1101.89990	519.00000	6.81000	53.75999	0.10610	1814.66992	0.0
17	1102.79980	532.69995	6.78000	53.81999	0.10680	1827.00000	0.0
17	1102.79980	533.19995	6.78000	53.84999	0.10690	1831.00000	0.0
17	1103.09985	531.79980	6.77000	53.81999	0.10700	1835.00000	0.0
17	1104.09985	533.79980	6.75000	53.84999	0.10740	1839.00000	0.0
17	1104.39990	534.59985	6.76000	53.85999	0.10730	1843.00000	0.0
17	1096.59985	532.50000	6.71000	53.70999	0.10740	1847.00000	0.0
17	1079.69995	508.69995	6.72000	53.39000	0.10600	1851.00000	0.0
17	1077.89990	507.69995	6.73000	53.39000	0.10590	1855.00000	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

10-268- 40		*** NORMALIZED TO TC=520 TH=1090 ***					
FIX.	HOT JUNG TEMP	COLD JUNG TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR
	(F)	(F)	(Ω)	(mV)	(WATT)	(HRS)	
17	1073.69995	504.59985	6.74000	53.34999	0.10560	1859.00000	0.0
17	1080.00000	507.89990	6.75000	53.45000	0.10580	1863.00000	0.0
17	1080.69995	511.19995	6.74000	53.48000	0.10610	1867.00000	0.0
17	1080.69995	511.09985	6.75000	53.51999	0.10600	1871.00000	0.0
17	1083.19995	515.89990	6.76000	53.65999	0.10640	1895.00000	0.0
17	1082.39990	513.79980	6.77000	53.67000	0.10640	1911.00000	0.0
17	1082.09985	513.89990	6.76000	53.67999	0.10650	1915.00000	0.0
17	1084.79980	509.50000	6.88000	53.78000	0.10530	1927.00000	0.0
17	1082.89990	510.79980	6.82000	53.75999	0.10600	1931.00000	0.0
17	1084.29980	511.19995	6.83000	53.78999	0.10590	1935.00000	0.0
17	1085.09985	512.50000	6.82000	53.81000	0.10610	1939.00000	0.0
17	1086.79980	513.19995	6.84000	53.82999	0.10600	1943.00000	0.0
17	1085.79980	513.39990	6.82000	53.81999	0.10610	1947.00000	0.0
17	1088.29980	513.29980	6.84000	53.84999	0.10600	1951.00000	0.0
17	1088.59985	514.19995	6.83000	53.84000	0.10620	1955.00000	0.0
17	1101.00000	520.79980	6.83000	54.04999	0.10690	1959.00000	0.0
17	1101.59985	521.79980	6.81000	54.06000	0.10720	1963.00000	0.0
17	1101.89990	521.59985	6.82000	54.03999	0.10700	1967.00000	0.0
17	1101.89990	521.00000	6.81000	54.00000	0.10700	1971.00000	0.0
17	1103.50000	520.79980	6.80000	54.01999	0.10720	1975.00000	0.0
17	1103.79980	520.89990	6.81000	54.03999	0.10730	1979.00000	0.0
17	1103.50000	520.19995	6.80000	54.03000	0.10740	1983.00000	0.0
17	1104.39990	520.69995	6.79000	54.00000	0.10730	1987.00000	0.0
17	1086.19995	515.00000	6.77000	53.73000	0.10660	1991.00000	0.0
17	1077.00000	506.50000	6.79000	53.62999	0.10580	1995.00000	0.0
17	1067.59985	501.59985	6.79000	53.51999	0.10540	1999.00000	0.0
17	1069.89990	502.39990	6.80000	53.57999	0.10560	2003.00000	0.0
17	1071.50000	503.19995	6.80000	53.62000	0.10560	2007.00000	0.0
17	1068.59985	502.79980	6.80000	53.59000	0.10560	2011.00000	0.0
17	1071.50000	504.00000	6.81000	53.64000	0.10570	2015.00000	0.0
17	1066.50000	502.19995	6.81000	53.57999	0.10530	2019.00000	0.0
17	1071.89990	503.59985	6.81000	53.64999	0.10570	2023.00000	0.0
17	1066.79980	500.89990	6.82000	53.59999	0.10530	2027.00000	0.0
17	1066.09985	500.09985	6.81000	53.59000	0.10540	2030.16992	0.0
17	1078.79980	505.50000	6.83000	53.70000	0.10560	2039.00000	0.0
17	1078.89990	506.69995	6.81000	53.71999	0.10590	2043.00000	0.0
17	1071.89990	501.39990	6.80000	53.60999	0.10570	2051.00000	0.0
17	1071.50000	504.39990	6.80000	53.62000	0.10570	2055.00000	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

7-238 FIX.	10-268- 40 HOT JUNC TEMP	COLD JUNC TEMP	*** RESISTANCE	NORMALIZED TO TC=520 TH=1090 SEEBECK VOLTAGE	*** POWER	TIME	P. FACTOR
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)	
17	1090.79980	511.59985	6.80000	53.89000	0.10680	2059.00000	0.0
17	1089.59985	512.39990	6.80000	53.84000	0.10660	2063.00000	0.0
17	1076.19995	504.39990	6.79000	53.64000	0.10600	2067.00000	0.0
17	1074.69995	503.00000	6.79000	53.62000	0.10590	2071.00000	0.0
17	1074.00000	501.79980	6.79000	53.60999	0.10580	2075.00000	0.0
17	1074.39990	502.09985	6.79000	53.62999	0.10580	2079.00000	0.0
17	1075.69995	504.39990	6.79000	53.64000	0.10600	2083.00000	0.0
17	1097.59985	515.09985	6.81000	53.95000	0.10690	2086.56982	0.0
17	1098.59985	517.69995	6.75000	53.81999	0.10740	2159.00000	0.0
17	1098.59985	517.69995	6.75000	53.81999	0.10740	2159.00000	0.0
17	1098.29980	518.00000	6.75000	53.79999	0.10720	2163.00000	0.0
17	1098.59985	517.50000	6.74000	53.78999	0.10730	2167.00000	0.0
17	1098.59985	517.50000	6.74000	53.78999	0.10730	2167.00000	0.0
17	1098.29980	515.50000	6.74000	53.75999	0.10730	2171.00000	0.0
17	1098.29980	515.50000	6.74000	53.75999	0.10730	2171.00000	0.0
17	1098.00000	512.39990	6.75000	53.75999	0.10710	2175.50000	0.0
17	1098.00000	512.39990	6.75000	53.75999	0.10710	2175.50000	0.0
17	1098.00000	512.09985	6.74000	53.75000	0.10710	2179.00000	0.0
17	1098.00000	512.09985	6.74000	53.75000	0.10710	2179.00000	0.0
17	1099.19995	512.39990	6.75000	53.75000	0.10700	2183.00000	0.0
17	1099.50000	512.09985	6.74000	53.73000	0.10700	2183.00000	0.0
17	1099.50000	511.39990	6.74000	53.73999	0.10700	2187.00000	0.0
17	1099.50000	511.39990	6.74000	53.73999	0.10700	2187.00000	0.0
17	1099.50000	510.09985	6.75000	53.71999	0.10690	2191.00000	0.0
17	1099.50000	510.09985	6.75000	53.71999	0.10690	2191.00000	0.0
17	1098.89990	508.69995	6.76000	53.71999	0.10680	2195.00000	0.0
17	1098.89990	508.69995	6.76000	53.71999	0.10680	2195.00000	0.0
17	1098.89990	509.19995	6.75000	53.73999	0.10690	2199.00000	0.0
17	1098.89990	509.19995	6.75000	53.73999	0.10690	2199.00000	0.0
17	1067.29980	496.59985	6.73000	53.25999	0.10550	2203.00000	0.0
17	1067.29980	496.59985	6.73000	53.25999	0.10550	2203.00000	0.0
17	1062.29980	494.59985	6.75000	51.75000	0.09920	2207.00000	0.0
17	1062.29980	494.59985	6.75000	51.75000	0.09920	2207.00000	0.0
17	1085.89990	506.00000	6.78000	52.14000	0.10020	2211.00000	0.0
17	1085.89990	506.00000	6.78000	52.14000	0.10020	2211.00000	0.0
17	1085.79980	504.50000	6.80000	52.03999	0.09960	2215.00000	0.0
17	1085.79980	504.50000	6.80000	52.03999	0.09960	2215.00000	0.0
17	1088.19995	505.29980	6.79000	51.92999	0.09930	2219.00000	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

IO-26B- 40		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	WOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	
	(F)	(F)	(Ω)	(mV)	(WATT)	(HRS)	
17	1088.19995	505.29980	6.79000	51.92999	0.09930	2219.00000	0.0
17	1085.69995	505.79980	6.78000	52.10999	0.10020	2223.00000	0.0
17	1085.69995	505.79980	6.78000	52.10999	0.10020	2223.00000	0.0
17	1076.00000	501.79980	6.74000	51.67000	0.09900	2249.00000	0.0
17	1076.00000	501.79980	6.74000	51.67000	0.09900	2249.00000	0.0
17	1081.19995	505.49985	6.74000	51.92999	0.10000	2251.00000	0.0
17	1081.19995	505.49985	6.74000	51.92999	0.10000	2251.00000	0.0
17	1080.29980	504.69995	6.79000	51.98999	0.10020	2255.00000	0.0
17	1080.29980	504.69995	6.75000	51.98999	0.10020	2255.00000	0.0
17	1084.19995	506.50000	6.77000	51.95999	0.09980	2259.00000	0.0
17	1084.19995	506.50000	6.77000	51.95999	0.09980	2259.00000	0.0
17	1082.69995	504.19995	6.78000	51.92000	0.09940	2263.00000	0.0
17	1082.69995	504.19995	6.78000	51.92000	0.09940	2263.00000	0.0
17	1082.50000	503.69995	6.79000	52.01999	0.09960	2267.00000	0.0
17	1082.50000	503.69995	6.79000	52.01999	0.09960	2267.00000	0.0
17	1083.09985	505.00000	6.76000	51.87000	0.09950	2271.00000	0.0
17	1083.09985	505.00000	6.76000	51.87000	0.09950	2271.00000	0.0
17	1082.39990	503.59985	6.76000	51.84999	0.09940	2275.00000	0.0
17	1067.79980	496.89990	6.76000	51.53999	0.09820	2283.00000	0.0
17	1066.19995	495.19995	6.79000	51.56999	0.09790	2303.00000	0.0
17	1066.19995	495.19995	6.79000	51.56999	0.09790	2303.00000	0.0
17	1064.89990	494.09985	6.78000	51.51999	0.09780	2307.00000	0.0
17	1064.89990	494.09985	6.78000	51.51999	0.09780	2307.00000	0.0
17	1064.59985	493.89990	6.80000	51.57999	0.09780	2311.00000	0.0
17	1064.59985	493.89990	6.80000	51.57999	0.09780	2311.00000	0.0
17	1064.59985	494.29980	6.65000	51.34999	0.09920	2315.00000	0.0
17	1064.59985	494.29980	6.65000	51.34999	0.09920	2315.00000	0.0
17	1061.09985	494.00000	6.79000	51.64999	0.09820	2319.00000	0.0
17	1061.09985	494.00000	6.79000	51.64999	0.09820	2319.00000	0.0
17	1080.09985	513.39990	6.80000	52.42999	0.10110	2326.99976	0.0
17	1078.00000	511.59985	6.78000	52.00999	0.09970	2347.00073	0.0
17	1088.19995	517.19995	6.77000	52.42000	0.10140	2351.00024	0.0
17	1088.09985	517.19995	6.77000	52.34999	0.10120	2354.99976	0.0
17	1087.59985	516.09985	6.77000	52.32999	0.10110	2359.00024	0.0
17	1087.39990	515.39990	6.76000	52.42000	0.10160	2362.99976	0.0
17	1087.89990	516.39990	6.75000	52.40999	0.10170	2366.99927	0.0
17	1087.89990	517.09985	6.75000	52.34000	0.10140	2371.00000	0.0
17	1085.69995	515.89990	6.76000	52.18999	0.10080	2379.00000	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

10-268- 40		*** NORMALIZED TO TC=520 TH=1090 ***						
7-240	FIX. HOT JUNC TEMP	COLD JUNC TEMP	RESISTANCE	SEEBECK VOLTAGE	POWER	TIME	P. FACTOR	
	(F)	(F)	(M OHM)	(MV)	(WATT)	(HRS)		
	17	1084.69995	513.69995	6.76000	52.12999	0.10050	2387.00024	0.0
	17	1085.79980	514.79980	6.77000	52.17000	0.10060	2390.99976	0.0
	17	1085.50000	515.39990	6.76000	52.12999	0.10050	2395.00049	0.0
	17	1085.89990	516.09985	6.77000	52.06999	0.10010	2398.99976	0.0
	17	1085.69995	516.00000	6.74000	52.06000	0.10060	2403.00049	0.0
	17	1085.09985	515.39990	6.77000	52.06000	0.10020	2407.00000	0.0
	17	1085.19995	514.50000	6.76000	52.03999	0.10010	2411.00049	0.0
	17	1085.50000	515.00000	6.75000	52.00999	0.10010	2415.00000	0.0
	17	1086.29980	517.00000	6.76000	51.93999	0.09980	2418.99951	0.0
	17	1086.29980	517.00000	6.74000	52.00999	0.10030	2426.99976	0.0
	17	1086.29980	516.09985	6.75000	52.00999	0.10020	2431.00049	0.0
	17	1086.29980	515.59985	6.75000	51.96999	0.10010	2439.00049	0.0
	17	1062.09985	505.69995	6.68000	51.90999	0.10090	2491.00073	0.0
	17	1083.19995	515.69995	6.71000	52.23000	0.10160	2495.00024	0.0
	17	1087.59985	517.00000	6.74000	52.14000	0.10080	2498.99976	0.0
	17	1085.50000	514.89990	6.73000	52.09999	0.10080	2503.00049	0.0
	17	1085.19995	515.00000	6.73000	51.98000	0.10030	2507.00000	0.0
	17	1085.19995	515.79980	6.74000	52.03999	0.10050	2510.99927	0.0
	17	1087.00000	515.89990	6.75000	51.95999	0.10000	2523.00000	0.0
	17	1087.29980	515.69995	6.74000	52.03000	0.10040	2527.00073	0.0
	17	1087.79980	515.50000	6.76000	52.00999	0.10000	2531.00024	0.0
	17	1085.19995	516.59985	6.74000	51.98000	0.10020	2538.99927	0.0
	17	1085.00000	516.29980	6.74000	52.06999	0.10060	2543.00000	0.0
	17	1084.69995	515.09985	6.75000	51.89000	0.09980	2547.00049	0.0
	17	1085.00000	516.50000	6.73000	51.95000	0.10020	2551.00000	0.0
	17	1085.50000	516.79980	6.74000	51.84000	0.09970	2555.00073	0.0
	17	1084.69995	516.09985	6.74000	51.87999	0.09980	2559.00024	0.0
	17	1083.69995	492.50000	6.77000	51.67000	0.09860	2587.00000	0.0
	17	1090.50000	495.09985	6.71000	51.78000	0.09990	2590.99951	0.0
	17	1092.19995	497.39990	6.72000	51.70000	0.09950	2595.00024	0.0
	17	1092.00000	495.89990	6.75000	51.48999	0.09820	2598.99951	0.0
	17	1092.00000	496.29980	6.74000	51.50999	0.09840	2603.00024	0.0
	17	1092.50000	497.00000	6.73000	51.51999	0.09860	2607.00098	0.0
	17	1092.39990	496.50000	6.70000	51.56000	0.09920	2626.99951	0.0
	17	1092.39990	496.69995	6.70000	51.50999	0.09900	2631.00024	0.0
	17	1092.89990	496.79980	6.69000	51.51999	0.09920	2635.00073	0.0
	17	1093.50000	497.00000	6.69000	51.48000	0.09910	2647.00049	0.0
	17	1093.39990	497.19995	6.69000	51.48000	0.09910	2651.00000	0.0

TABLE 7.7.8-1. TELPS LEG PERFORMANCE DATA USED TO PLOT THE GRAPH (Cont)

10-26B- 40		*** NORMALIZED TO TC=520 TH=1090 ***					P. FACTOR
FIX.	HOT JUNC TEMP (F)	COLD JUNC TEMP (F)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	
17	1093.50000	497.79980	6.69000	51.51999	0.09910	2654.99927	0.0
17	1090.89990	532.29980	6.67000	53.20999	0.10610	2682.99927	0.0
17	1094.39990	534.69995	6.63000	51.82999	0.10120	2687.00000	0.0
17	1094.09985	535.29980	6.67000	51.42999	0.09910	2691.00049	0.0
17	1093.89990	534.89990	6.65000	51.39000	0.09930	2695.00000	0.0
17	1093.79980	533.59985	6.65000	51.28999	0.09880	2699.00073	0.0
17	1093.79980	534.29980	6.66000	51.25999	0.09870	2703.00024	0.0
17	1098.00000	539.50000	6.62000	51.67999	0.10090	2711.03003	0.0
17	1097.59985	538.39990	6.67000	51.39999	0.09900	2714.99976	0.0
17	1098.00000	537.89990	6.64000	51.37999	0.09950	2719.00049	0.0
17	1099.79980	539.29980	6.66000	51.42999	0.09920	2723.00000	0.0

AVERAGE VALUES

10-26B- 40 TIME RANGE (HRS)	RESISTANCE (M OHM)	SEEBECK VOLTAGE (MV)	POWER (WATT)	TIME (HRS)	NO. OF DATA
0 - 233	11.10533	63.52203	0.09091	106.33685	28
233 - 1045	7.76284	55.03784	0.09855	600.13086	106
1045 - 1885	6.95019	53.88860	0.10448	1467.82471	174
1885 - 2400	6.77658	52.96524	0.10352	2160.92358	114
2400 - 3000	6.71420	51.80321	0.09993	2570.81519	45

8. ANALYSIS OF VARIANCE OF LONG-TERM INGRADIENT PERFORMANCE

8.1 GENERAL

An analysis of variance was performed on the long-term ingradient test results for Lot 10 P-type and Lot 9 N-type legs to determine the dependence of Seebeck voltage, resistance, and $E^2/4R$ power on time, hot junction temperature, batch, and direction of current flow during periods of ingradient soak storage. In each case the performance was evaluated on the basis of the normalized values averaged over each of the four measurement periods shown in the test matrix, Figure 7.7-1.

In the ANOVA summary, Table 8.1-1, and the computer tab sheets the variables are identified as follows:

SOURCE	VARIABLE	LEVEL	LEVEL IDENTITY
A	time	1	0 - 233 hr
		2	233-2045 hr
		3	1045-1885 hr
		4	1885-2400 hr
B	hot junction temperature	1	1090 °F
		2	1220 °F
		3	1350 °F
C	batch	1	(See order of listing in test matrix, Fig. 7.7-1)
		2	
		3	
		4	
		5	
D	current direction	1	"forward"
		2	"reverse"

*"forward" current direction is defined as the normal direction of current flow in an operating thermoelectric leg. (I=2 amperes)

Initially, a three-way analysis of variance was used to determine the effect on performance of time, hot junction temperature, and batch. Subsequently, the effect of current direction was included and the analysis rerun as a four-way ANOVA. Calculations were performed on an IBM-360 computer.

The test matrix, Figure 7.7-1, called for the testing of three legs from each batch at each of three different hot junction temperatures. This resulted in two of the three legs being soaked in one current direction, either "forward" or "reverse", while the remaining leg was soaked in the opposite direction. This lack of symmetry required special treatment in the four-way ANOVA. Essentially, the system was orthogonized by using as a cell entry the average performance values obtained on the two legs from each batch and hot junction temperature which were soaked in the same current direction. Prior to averaging, these values were used to determine the "within" cell variance in a separate calculation. This variance was used as a yardstick to determine which effects were significant at the 95 percent ($\alpha = 0.05$) level.

TABLE 8.1-1. SUMMARY OF SIGNIFICANT FACTORS IN THREE-WAY AND FOUR-WAY ANALYSIS OF VARIANCE OF LONG-TERM PERFORMANCE TESTS

LOT 9 N-TYPE

	THREE-WAY ANOVA	FOUR-WAY ANOVA
Resistance	A, B, C	A, B, C, D, CD
Seebeck Voltage	A, B, C	A, B, C, CD
Power	A, B	A, B, D, AC, AD, BC, BD, CD

LOT 10 P-TYPE

	THREE-WAY ANOVA	FOUR-WAY ANOVA
Resistance	A, B, C	A, B, C
Seebeck Voltage	A, B, C	A, B, C
Power	A, B	A, B, A, B

The results of the three-way and four-way ANOVA of P-leg performance are in essential agreement. The resistance, voltage, and power are all dependent on both time and temperature. The resistance and voltage decrease with time and increase with hot junction temperature. The power increases with hot junction temperature as expected. The dependence of power on time is complex, indicating the probable influence of more than one mechanism such as the combined effects of change of leg geometry and material chemical equilibrium

with time. The effect of batch, which is significantly detectable in resistance and voltage, is apparently due to minor differences in carrier concentration in the individual batches in that the effects of batch on Seebeck voltage and resistance are in the same direction. No significant effect of batch variability on power output was detected.

The same observations are true for N-legs as well. However, in the four-way ANOVA there is a significant dependence of leg resistance on current direction. Legs stored in the "forward" direction exhibit an approximate 5 percent higher resistance than those stored in the "reverse" direction. This effect accounts for the dependence of power on current direction since there is no significant dependence of Seebeck voltage on current direction. The fact that the N-legs also exhibit a batch-current direction interaction supports the view that minor differences in the amount of liquid second phase are responsible for the observed differences. Positive ion transport down the temperature gradient and in the direction of the electric field for a "forward" current flow could be depleting the hot end of second phase lead whereas a "reverse" current flow would oppose the effect of thermal diffusion tending to maintain a dispersed second phase. The suspected loss of tellurium due to the formation of volatile TeO in the TELPS fixtures would give rise to additional excess lead and thus amplify the effect of current direction. It is perhaps significant to note that the observed changes in N-leg performance with time are greater than those normally observed in a clean, hermetically sealed generator or test module. No dependence of P-leg performance on direction of current flow during soak storage was noted. The four-way ANOVA detected a time-temperature dependence of power overlooked by the three-way analysis.

The four-way ANOVA of N-leg power indicated a number of two-factor dependences which are difficult to explain within today's understanding of the state-of-the-art.

8.2 ANALYSIS OF VARIANCE RESULTS

TABLE 8.2-1. ANALYSIS OF VARIANCE SUMMARY

THREE-WAY ANOVA		
ANOVA OF:	AS A FUNCTION OF:	TABLE NUMBER
N-type resistance	time, T_H , batch	8.2-2
N-type Seebeck voltage	time, T_H , batch	8.2-3
N-type power	time, T_H , batch	8.2-4
P-type resistance	time, T_H , batch	8.2-5
P-type Seebeck voltage	time, T_H , batch	8.2-6
P-type power	time, T_H , batch	8.2-7
FOUR-WAY ANOVA		
ANOVA OF:	AS A FUNCTION OF:	TABLE NUMBER
N-type resistance	time, T_H , batch, current direction	8.2-8
N-type Seebeck voltage	time, T_H , batch, current direction	8.2-9
N-type power	time, T_H , batch, current direction	8.2-10
P-type resistance	time, T_H , batch, current direction	8.2-11
P-type Seebeck voltage	time, T_H , batch, current direction	8.2-12
P-type power	time, T_H , batch, current direction	8.2-13

TABLE 8.2-2 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE

ANALYSIS OF VARIANCE								TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE			
A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	0	0	0	0	0	38.04690	38.04690	482.70416	3
1	1	2	0	0	0	0	0	37.63450	37.63450	472.12536	3
1	1	3	0	0	0	0	0	37.49360	37.49360	468.72683	3
1	1	4	0	0	0	0	0	39.49330	39.49330	520.07488	3
1	1	5	0	0	0	0	0	37.77370	37.77370	475.80319	3
1	2	1	0	0	0	0	0	43.43310	43.43310	629.54937	3
1	2	2	0	0	0	0	0	42.64000	42.64000	606.28546	3
1	2	3	0	0	0	0	0	45.04240	45.04240	678.18137	3
1	2	4	0	0	0	0	0	44.52620	44.52620	663.76984	3
1	2	5	0	0	0	0	0	41.90440	41.90440	585.34432	3
1	3	1	0	0	0	0	0	47.72080	47.72080	762.29363	3
1	3	2	0	0	0	0	0	43.34420	43.34420	626.90741	3
1	3	3	0	0	0	0	0	47.39450	47.39450	751.23917	3
1	3	4	0	0	0	0	0	48.15250	48.15250	773.08702	3
1	3	5	0	0	0	0	0	46.96490	46.96490	738.29420	3
2	1	1	0	0	0	0	0	37.34620	37.34620	465.06070	3
2	1	2	0	0	0	0	0	36.52140	36.52140	444.66642	3
2	1	3	0	0	0	0	0	37.75160	37.75160	475.15751	3
2	1	4	0	0	0	0	0	37.69390	37.69390	474.64960	3
2	1	5	0	0	0	0	0	35.81280	35.81280	427.63373	3
2	2	1	0	0	0	0	0	43.86520	43.86520	641.84774	3
2	2	2	0	0	0	0	0	42.09850	42.09850	590.85645	3
2	2	3	0	0	0	0	0	45.25300	45.25300	683.54546	3
2	2	4	0	0	0	0	0	44.45910	44.45910	659.98804	3
2	2	5	0	0	0	0	0	41.81110	41.81110	583.11463	3
2	3	1	0	0	0	0	0	45.58580	45.58580	696.46311	3
2	3	2	0	0	0	0	0	44.99930	44.99930	675.36738	3
2	3	3	0	0	0	0	0	47.86020	47.86020	765.04699	3
2	3	4	0	0	0	0	0	47.64940	47.64940	757.19036	3
2	3	5	0	0	0	0	0	48.01440	48.01440	770.46757	3
3	1	1	0	0	0	0	0	33.49350	33.49350	387.72656	3
3	1	2	0	0	0	0	0	36.15420	36.15420	436.19491	3
3	1	3	0	0	0	0	0	37.67050	37.67050	473.55357	3
3	1	4	0	0	0	0	0	33.89820	33.89820	403.22892	3
3	1	5	0	0	0	0	0	36.61920	36.61920	447.15008	3
3	2	1	0	0	0	0	0	43.00790	43.00790	616.76149	3
3	2	2	0	0	0	0	0	41.10550	41.10550	563.73869	3
3	2	3	0	0	0	0	0	44.67230	44.67230	666.17271	3
3	2	4	0	0	0	0	0	40.30990	40.30990	550.99384	3
3	2	5	0	0	0	0	0	41.42890	41.42890	572.34668	3
3	3	1	0	0	0	0	0	41.60850	41.60850	589.63596	3
3	3	2	0	0	0	0	0	41.62200	41.62200	578.83867	3
3	3	3	0	0	0	0	0	44.59600	44.59600	663.35817	3
3	3	4	0	0	0	0	0	33.07070	33.07070	389.57759	3
3	3	5	0	0	0	0	0	41.37140	41.37140	572.54933	3
4	1	1	0	0	0	0	0	34.32980	34.32980	401.51255	3
4	1	2	0	0	0	0	0	35.39760	35.39760	418.16500	3
4	1	3	0	0	0	0	0	36.37770	36.37770	441.97752	3
4	1	4	0	0	0	0	0	34.91310	34.91310	414.31094	3
4	1	5	0	0	0	0	0	35.87740	35.87740	429.35981	3
4	2	1	0	0	0	0	0	39.23500	39.23500	519.36842	3
4	2	2	0	0	0	0	0	39.88210	39.88210	530.49497	3
4	2	3	0	0	0	0	0	44.83320	44.83320	670.61342	3
4	2	4	0	0	0	0	0	36.86200	36.86200	470.94683	3
4	2	5	0	0	0	0	0	41.21850	41.21850	567.15299	3
4	3	1	0	0	0	0	0	40.31990	40.31990	555.11599	3
4	3	2	0	0	0	0	0	40.71720	40.71720	553.98000	3

TABLE 8.2-2 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
4	3	3	0	0	0	0	0	43.40670	43.40670	628.47751	3
4	3	4	0	0	0	0	0	33.80340	33.80340	392.09130	3
4	3	5	0	0	0	0	0	40.17610	40.17610	542.51133	3

ANALYSIS OF VARIANCE TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE											
SOURCE								DEG/FRFEDOM	SUM/SQUARES	MEAN SQUARE	F
BETWEEN								59	356.2666	6.0384	3.781
WITHIN								120	191.6460	1.5971	
TOTAL								179	547.9126		

A	B	C	D	E	F	G	H	SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
1	0	0	0	0	0	0	0	641.5650		641.5650	45	14.2570	0.6666
2	0	0	0	0	0	0	0	636.7219		636.7219	45	14.1494	0.5590
3	0	0	0	0	0	0	0	590.6287		590.6287	45	13.1251	-0.4653
4	0	0	0	0	0	0	0	577.3497		577.3497	45	12.8300	-0.7604
3									69.8197				
0	1	0	0	0	0	0	0	730.2991		730.2991	60	12.1717	-1.4187
0	2	0	0	0	0	0	0	847.5883		847.5883	60	14.1265	0.5361
0	3	0	0	0	0	0	0	868.3779		868.3779	60	14.4730	0.8826
2									184.7484				
0	0	1	0	0	0	0	0	487.9926		487.9926	36	13.5553	-0.0350
0	0	2	0	0	0	0	0	482.1165		482.1165	36	13.3921	-0.1982
0	0	3	0	0	0	0	0	512.3517		512.3517	36	14.2320	0.6416
0	0	4	0	0	0	0	0	474.8317		474.8317	36	13.1898	-0.4006
0	0	5	0	0	0	0	0	488.9728		488.9728	36	13.5826	-0.0078
4									22.0589				
1	1	0	0	0	0	0	0	190.4420		190.4420	15	12.6961	-0.8942
1	2	0	0	0	0	0	0	217.5461		217.5461	15	14.5031	0.9127
1	3	0	0	0	0	0	0	233.5769		233.5769	15	15.5718	1.9814
2	1	0	0	0	0	0	0	185.1259		185.1259	15	12.3417	-1.2486
2	2	0	0	0	0	0	0	217.4869		217.4869	15	14.4991	0.9088
2	3	0	0	0	0	0	0	234.1091		234.1091	15	15.6073	2.0169
3	1	0	0	0	0	0	0	177.8356		177.8356	15	11.8557	-1.7347
3	2	0	0	0	0	0	0	210.5245		210.5245	15	14.0350	0.4446
3	3	0	0	0	0	0	0	202.2686		202.2686	15	13.4846	-0.1058
4	1	0	0	0	0	0	0	176.8956		176.8956	15	11.7930	-1.7973
4	2	0	0	0	0	0	0	202.0308		202.0308	15	13.4687	-0.1216
4	3	0	0	0	0	0	0	198.4233		198.4233	15	13.2282	-0.3621
6									279.0875				
1	0	1	0	0	0	0	0	129.2008		129.2008	9	14.3556	0.7653
1	0	2	0	0	0	0	0	123.6187		123.6187	9	13.7354	0.1450
1	0	3	0	0	0	0	0	129.9305		129.9305	9	14.4367	0.8464
1	0	4	0	0	0	0	0	132.1720		132.1720	9	14.6858	1.0954
1	0	5	0	0	0	0	0	126.6430		126.6430	9	14.0714	0.4811
2	0	1	0	0	0	0	0	126.7972		126.7972	9	14.0886	0.4982
2	0	2	0	0	0	0	0	123.6192		123.6192	9	13.7355	0.1451
2	0	3	0	0	0	0	0	130.8648		130.8648	9	14.5405	0.9502
2	0	4	0	0	0	0	0	129.8024		129.8024	9	14.4225	0.8321
2	0	5	0	0	0	0	0	125.6383		125.6383	9	13.9598	0.3694
3	0	1	0	0	0	0	0	118.1099		118.1099	9	13.1233	-0.4670
3	0	2	0	0	0	0	0	118.8817		118.8817	9	13.2091	-0.3813

TABLE 8.2-2 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/80	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	0	5	0	0	0	0	0	126.9388		126.9388	9	14.1043	0.5139
3	0	4	0	0	0	0	0	107.2788		107.2788	9	11.9199	-1.6705
3	0	5	0	0	0	0	0	119.4195		119.4195	9	13.2688	-0.3215
4	0	1	0	0	0	0	0	113.8847		113.8847	9	12.6539	-0.9365
4	0	2	0	0	0	0	0	115.9969		115.9969	9	12.8885	-0.7018
4	0	3	0	0	0	0	0	124.6176		124.6176	9	13.8464	0.2560
4	0	4	0	0	0	0	0	105.5785		105.5785	9	11.7309	-1.8594
4	0	5	0	0	0	0	0	117.2720		117.2720	9	13.0302	-0.5601
12								121.3501					
0	1	1	0	0	0	0	0	143.2164		143.2164	12	11.9247	-1.6557
0	1	2	0	0	0	0	0	145.7077		145.7077	12	12.1423	-1.4481
0	1	3	0	0	0	0	0	149.2934		149.2934	12	12.4411	-1.1492
0	1	4	0	0	0	0	0	145.9985		145.9985	12	12.1665	-1.4238
0	1	5	0	0	0	0	0	146.0831		146.0831	12	12.1736	-1.4168
0	2	1	0	0	0	0	0	169.5412		169.5412	12	14.1284	0.5381
0	2	2	0	0	0	0	0	165.7261		165.7261	12	13.8105	0.2201
0	2	3	0	0	0	0	0	179.8009		179.8009	12	14.9834	1.3930
0	2	4	0	0	0	0	0	166.1572		166.1572	12	13.8464	0.2561
0	2	5	0	0	0	0	0	166.3629		166.3629	12	13.8636	0.2732
0	3	1	0	0	0	0	0	175.2350		175.2350	12	14.6029	1.0126
0	3	2	0	0	0	0	0	170.6827		170.6827	12	14.2236	0.6332
0	3	3	0	0	0	0	0	183.2574		183.2574	12	15.2714	1.6811
0	3	4	0	0	0	0	0	162.6760		162.6760	12	13.5563	-0.0340
0	3	5	0	0	0	0	0	176.5268		176.5268	12	14.7106	1.1202
8								217.4448					
1	1	1	0	0	0	0	0	38.0469		38.0469	3	12.6823	-0.9081
1	1	2	0	0	0	0	0	37.6345		37.6345	3	12.5448	-1.0455
1	1	3	0	0	0	0	0	37.4936		37.4936	3	12.4979	-1.0925
1	1	4	0	0	0	0	0	39.4933		39.4933	3	13.1644	-0.4259
1	1	5	0	0	0	0	0	37.7787		37.7787	3	12.5812	-0.9991
1	2	1	0	0	0	0	0	43.4331		43.4331	3	14.4777	0.8873
1	2	2	0	0	0	0	0	42.6400		42.6400	3	14.2133	0.6230
1	2	3	0	0	0	0	0	45.0424		45.0424	3	15.0141	1.4238
1	2	4	0	0	0	0	0	44.5262		44.5262	3	14.8421	1.2517
1	2	5	0	0	0	0	0	41.9044		41.9044	3	13.9681	0.3778
1	3	1	0	0	0	0	0	47.7208		47.7208	3	15.9069	2.3166
1	3	2	0	0	0	0	0	43.3442		43.3442	3	14.4481	0.8577
1	3	3	0	0	0	0	0	47.8945		47.8945	3	15.7982	2.2078
1	3	4	0	0	0	0	0	48.1525		48.1525	3	16.0508	2.4505
1	3	5	0	0	0	0	0	46.9649		46.9649	3	15.6550	2.0644
2	1	1	0	0	0	0	0	37.3462		37.3462	3	12.4487	-1.1416
2	1	2	0	0	0	0	0	38.3214		38.3214	3	12.6738	-1.4166
2	1	3	0	0	0	0	0	37.7516		37.7516	3	12.5839	-1.0065
2	1	4	0	0	0	0	0	37.6939		37.6939	3	12.5644	-1.0257
2	1	5	0	0	0	0	0	35.8128		35.8128	3	11.9376	-1.6528
2	2	1	0	0	0	0	0	43.8652		43.8652	3	14.6217	1.0314
2	2	2	0	0	0	0	0	42.0985		42.0985	3	14.0328	0.4425
2	2	3	0	0	0	0	0	45.2350		45.2350	3	15.0043	1.4940
2	2	4	0	0	0	0	0	44.4501		44.4501	3	14.6187	1.2293
2	2	5	0	0	0	0	0	41.8111		41.8111	3	13.9370	0.3467
2	3	1	0	0	0	0	0	45.5858		45.5858	3	15.1953	1.6049
2	3	2	0	0	0	0	0	44.9993		44.9993	3	14.9998	1.4094
2	3	3	0	0	0	0	0	47.8602		47.8602	3	15.9534	2.3630
2	3	4	0	0	0	0	0	47.8945		47.8945	3	15.7982	2.2078
2	3	5	0	0	0	0	0	48.8144		48.8144	3	16.0048	2.4144
3	1	1	0	0	0	0	0	33.4433		33.4433	3	11.1448	-2.4259
3	1	2	0	0	0	0	0	36.1542		36.1542	3	12.0514	-1.5390
3	1	3	0	0	0	0	0	37.6705		37.6705	3	12.5568	-1.0335
3	1	4	0	0	0	0	0	33.8982		33.8982	3	11.2994	-2.2910
3	1	5	0	0	0	0	0	38.0192		38.0192	3	12.6823	-0.9081
3	2	1	0	0	0	0	0	43.8652		43.8652	3	14.6217	1.0314
3	2	2	0	0	0	0	0	42.0985		42.0985	3	14.0328	0.4425

TABLE 8.2-2 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
#	B	C	D	E	F	G	H						
3	2	3	0	0	0	0	0	44.6723		44.6723	3	14.8908	1.3004
3	2	4	0	0	0	0	0	40.3099		40.3099	3	13.4366	0.1537
3	2	5	0	0	0	0	0	41.4289		41.4289	3	13.8096	0.2193
3	3	1	0	0	0	0	0	41.6085		41.6085	3	13.8695	0.2791
3	3	2	0	0	0	0	0	41.6220		41.6220	3	13.8740	0.2836
3	3	3	0	0	0	0	0	44.5960		44.5960	3	14.8653	1.2750
3	3	4	0	0	0	0	0	33.0707		33.0707	3	11.0236	-2.5668
3	3	5	0	0	0	0	0	41.3714		41.3714	3	13.7905	0.2001
4	1	1	0	0	0	0	0	34.3298		34.3298	3	11.4433	-2.1471
4	1	2	0	0	0	0	0	35.3976		35.3976	3	11.7992	-1.7912
4	1	3	0	0	0	0	0	36.3777		36.3777	3	12.1259	-1.4645
4	1	4	0	0	0	0	0	34.9131		34.9131	3	11.6377	-1.9527
4	1	5	0	0	0	0	0	35.8774		35.8774	3	11.9591	-1.6312
4	2	1	0	0	0	0	0	39.2350		39.2350	3	13.0783	-0.5120
4	2	2	0	0	0	0	0	39.8821		39.8821	3	13.2940	-0.2963
4	2	3	0	0	0	0	0	44.8332		44.8332	3	14.9444	1.3540
4	2	4	0	0	0	0	0	36.8620		36.8620	3	12.2873	-1.3030
4	2	5	0	0	0	0	0	41.2185		41.2185	3	13.7395	0.1491
4	3	1	0	0	0	0	0	40.3199		40.3199	3	13.4400	-0.1504
4	3	2	0	0	0	0	0	40.7172		40.7172	3	13.5724	-0.0180
4	3	3	0	0	0	0	0	43.4067		43.4067	3	14.4689	0.8785
4	3	4	0	0	0	0	0	33.8034		33.8034	3	11.2678	-2.3226
4	3	5	0	0	0	0	0	40.1761		40.1761	3	13.3920	-0.1983
24									356.2666				

TABLE 8.2-2 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE OF VARIATION										TABLE 8.2-2 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE			
SOURCE										DEG/FREEDOM			
A B C D E F G H										SUM/SQUARES			
										MEAN SQUARE			
										F			
										P			
										F _{0.05}			
A	1	0	0	0	0	0	0	0	0	1	14.587	3.68	
B	0	1	0	0	0	0	0	0	0	2	184.7484	3.07	
C	0	0	1	0	0	0	0	0	0	4	22.0589	2.46	
AB	1	1	0	0	0	0	0	0	0	4	10.6375	2.18	
AC	1	0	1	0	0	0	0	0	0	12	29.4715	1.83	
BC	0	1	1	0	0	0	0	0	0	8	10.6375	2.02	
ABC	1	1	1	0	0	0	0	0	0	24	10.6375	1.16	
RESIDUAL										120	191.6465	1.5971	

A = TIME

B = TEMPERATURE

C = BATCH

D = BATCH

TABLE 8.2-3 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE

ANALYSIS OF VARIANCE								TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE			
A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	0	0	0	0	0	201.42500	201.42500	13302.74035	3
1	1	2	0	0	0	0	0	201.25430	201.25430	13302.74035	3
1	1	3	0	0	0	0	0	202.42000	202.42000	13456.86874	3
1	1	4	0	0	0	0	0	201.44460	201.44460	13526.81057	3
1	1	5	0	0	0	0	0	201.25470	201.25470	13501.26808	3
1	2	1	0	0	0	0	0	252.36130	252.36130	21230.12923	3
1	2	2	0	0	0	0	0	248.11970	248.11970	20887.99896	3
1	2	3	0	0	0	0	0	238.27370	238.27370	20679.27648	3
1	2	4	0	0	0	0	0	248.84810	248.84810	20580.81135	3
1	2	5	0	0	0	0	0	248.24940	248.24940	20543.24880	3
1	3	1	0	0	0	0	0	297.32240	297.32240	29495.19130	3
1	3	2	0	0	0	0	0	289.34130	289.34130	27908.31369	3
1	3	3	0	0	0	0	0	292.26480	292.26480	28800.88871	3
1	3	4	0	0	0	0	0	284.49880	284.49880	26982.28184	3
1	3	5	0	0	0	0	0	287.84130	287.84130	27488.88075	3
2	1	1	0	0	0	0	0	194.92130	194.92130	12667.95528	3
2	1	2	0	0	0	0	0	193.28660	193.28660	12453.96659	3
2	1	3	0	0	0	0	0	198.75450	198.75450	13171.14210	3
2	1	4	0	0	0	0	0	194.80320	194.80320	12682.48871	3
2	1	5	0	0	0	0	0	191.88940	191.88940	12185.48817	3
2	2	1	0	0	0	0	0	248.12340	248.12340	20130.18946	3
2	2	2	0	0	0	0	0	237.55710	237.55710	18811.58394	3
2	2	3	0	0	0	0	0	244.40350	244.40350	19913.36183	3
2	2	4	0	0	0	0	0	241.20240	241.20240	19401.08315	3
2	2	5	0	0	0	0	0	239.79780	239.79780	19188.49939	3
2	3	1	0	0	0	0	0	282.27030	282.27030	26658.44601	3
2	3	2	0	0	0	0	0	277.88890	277.88890	25681.80829	3
2	3	3	0	0	0	0	0	283.74200	283.74200	26856.13038	3
2	3	4	0	0	0	0	0	278.49790	278.49790	25858.00940	3
2	3	5	0	0	0	0	0	281.52160	281.52160	26426.27042	3
3	1	1	0	0	0	0	0	186.12360	186.12360	13488.82882	3
3	1	2	0	0	0	0	0	187.70890	187.70890	11784.89044	3
3	1	3	0	0	0	0	0	195.18060	195.18060	13780.28874	3
3	1	4	0	0	0	0	0	181.19200	181.19200	11027.16191	3
3	1	5	0	0	0	0	0	188.67390	188.67390	11868.37354	3
3	2	1	0	0	0	0	0	240.64850	240.64850	19312.80052	3
3	2	2	0	0	0	0	0	229.89810	229.89810	17896.87832	3
3	2	3	0	0	0	0	0	240.45320	240.45320	19274.70718	3
3	2	4	0	0	0	0	0	228.24200	228.24200	17188.81867	3
3	2	5	0	0	0	0	0	232.37140	232.37140	18003.47943	3
3	3	1	0	0	0	0	0	264.14640	264.14640	23357.11945	3
3	3	2	0	0	0	0	0	263.39650	263.39650	23133.84942	3
3	3	3	0	0	0	0	0	272.37620	272.37620	24184.89887	3
3	3	4	0	0	0	0	0	258.71760	258.71760	21479.81179	3
3	3	5	0	0	0	0	0	244.80820	244.80820	20861.81888	3
4	1	1	0	0	0	0	0	186.12360	186.12360	11401.75037	3
4	1	2	0	0	0	0	0	186.98220	186.98220	11454.21723	3
4	1	3	0	0	0	0	0	194.68190	194.68190	12634.77968	3
4	1	4	0	0	0	0	0	180.29810	180.29810	11179.17733	3
4	1	5	0	0	0	0	0	187.89990	187.89990	11739.48888	3
4	2	1	0	0	0	0	0	228.24200	228.24200	17883.82281	3
4	2	2	0	0	0	0	0	226.80820	226.80820	17194.18970	3
4	2	3	0	0	0	0	0	238.44930	238.44930	18959.89012	3
4	2	4	0	0	0	0	0	221.38970	221.38970	16407.05814	3
4	2	5	0	0	0	0	0	231.78280	231.78280	17888.88888	3
4	3	1	0	0	0	0	0	243.11780	243.11780	20177.28887	3
4	3	2	0	0	0	0	0				3

TABLE 8.2-3 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

A	B	C	D	E	F	G	H	X1	X2	X1X2	N	
4	3	3	0	0	0	0	0	270.52570	270.52570	24024.00404	3	
4	3	4	0	0	0	0	0	251.14130	251.14130	21041.04405	3	
4	3	5	0	0	0	0	0	266.70410	266.70410	23712.54258	3	
ANALYSIS OF VARIANCE												
SOURCE								DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	F	
BETWEEN								99	84796.8881	856.5241	51.726	
WITHIN								180	886.8200	4.9268		
TOTAL								179	85683.7081			
SOURCE								SUM XB	SUM XB ²	FREQUENCY	MEAN X1	DEVIAT X1
A	B	C	D	E	F	G	H					
1	0	0	0	0	0	0	0	3709.0142	3709.0142	45	82.4225	3.9376
2	0	0	0	0	0	0	0	3585.5833	3585.5833	45	79.6796	1.1947
3	0	0	0	0	0	0	0	3431.0741	3431.0741	45	76.2461	-2.2388
4	0	0	0	0	0	0	0	3401.6149	3401.6149	45	75.5915	-2.6904
								3	1264.2413			
0	1	0	0	0	0	0	0	3859.8053	3859.8053	60	64.3301	-14.1548
0	2	0	0	0	0	0	0	4775.6155	4775.6155	60	79.5936	1.1087
0	3	0	0	0	0	0	0	5481.8671	5481.8671	60	91.3581	15.0488
								2	22907.9179			
0	0	1	0	0	0	0	0	2847.8973	2847.8973	36	79.1083	0.6233
0	0	2	0	0	0	0	0	2805.2539	2805.2539	36	77.9237	-0.5612
0	0	3	0	0	0	0	0	2805.0484	2805.0484	36	77.9181	1.4832
0	0	4	0	0	0	0	0	2764.9947	2764.9947	36	76.8054	-1.6709
0	0	5	0	0	0	0	0	2824.0972	2824.0972	36	78.4471	-0.0870
								4	225.5569			
1	1	0	0	0	0	0	0	1203.8994	1203.8994	15	80.2333	-11.1516
1	2	0	0	0	0	0	0	1248.0462	1248.0462	15	82.5031	4.7101
1	3	0	0	0	0	0	0	1488.9686	1488.9686	15	99.2812	10.2462
2	1	0	0	0	0	0	0	972.8070	972.8070	15	64.8538	-13.6311
2	2	0	0	0	0	0	0	1208.6862	1208.6862	15	80.5791	2.0941
2	3	0	0	0	0	0	0	1404.0901	1404.0901	15	93.6060	15.1211
3	1	0	0	0	0	0	0	938.8798	938.8798	15	62.5919	-15.6898
3	2	0	0	0	0	0	0	1169.4672	1169.4672	15	78.0645	-0.5805
3	3	0	0	0	0	0	0	1322.7879	1322.7879	15	88.2819	9.8909
4	1	0	0	0	0	0	0	938.1199	938.1199	15	62.5413	-15.9436
4	2	0	0	0	0	0	0	1149.4159	1149.4159	15	76.6277	-1.8572
4	3	0	0	0	0	0	0	1314.0811	1314.0811	15	87.6054	9.1205
								6	23781.6182			
1	0	1	0	0	0	0	0	753.3095	753.3095	9	83.7011	5.2161
1	0	2	0	0	0	0	0	739.7153	739.7153	9	82.1906	3.7057
1	0	3	0	0	0	0	0	745.4585	745.4585	9	82.8287	4.3438
1	0	4	0	0	0	0	0	735.9833	735.9833	9	81.3088	2.8204
1	0	5	0	0	0	0	0	736.8484	736.8484	9	81.3884	3.8904
2	0	1	0	0	0	0	0	728.6879	728.6879	9	80.8277	0.0000
2	0	2	0	0	0	0	0	708.4020	708.4020	9	76.7113	0.2284
2	0	3	0	0	0	0	0	726.9000	726.9000	9	80.7667	2.2817
2	0	4	0	0	0	0	0	714.5055	714.5055	9	79.3895	0.9046
2	0	5	0	0	0	0	0					
3	0	1	0	0	0	0	0					
3	0	2	0	0	0	0	0					

TABLE 8.2-3 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/NO	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	0	3	0	0	0	0	0	709.0100		709.0100	9	78.7785	-8.2940
3	0	4	0	0	0	0	0	661.2516		661.2516	9	73.4724	-9.0125
3	0	5	0	0	0	0	0	689.1365		689.1365	9	76.5707	-1.9142
4	0	1	0	0	0	0	0	680.2803		680.2803	9	73.9834	-2.9916
4	0	2	0	0	0	0	0	476.3811		476.3811	9	73.1589	-2.3315
4	0	3	0	0	0	0	0	703.6708		703.6708	9	76.1663	-8.2964
4	0	4	0	0	0	0	0	655.2521		655.2521	9	72.8058	-5.6791
4	0	5	0	0	0	0	0	686.0565		686.0565	9	76.2285	-2.2564
								12	1687.0550				
0	1	1	0	0	0	0	0	770.8873		770.8873	12	64.2840	-14.2910
0	1	2	0	0	0	0	0	769.2300		769.2300	12	64.1025	-14.3824
0	1	3	0	0	0	0	0	791.0370		791.0370	12	65.9197	-12.5652
0	1	4	0	0	0	0	0	760.1629		760.1629	12	63.3469	-15.1380
0	1	5	0	0	0	0	0	704.8873		704.8873	12	64.0673	-14.0376
0	2	1	0	0	0	0	0	809.7894		809.7894	12	80.8111	2.3262
0	2	2	0	0	0	0	0	943.1881		943.1881	12	78.8944	0.1897
0	2	3	0	0	0	0	0	973.5997		973.5997	12	81.1333	2.6484
0	2	4	0	0	0	0	0	936.9762		936.9762	12	78.0813	-0.4056
0	2	5	0	0	0	0	0	952.1711		952.1711	12	79.3476	0.8627
0	3	1	0	0	0	0	0	1089.8888		1089.8888	12	93.8797	13.7908
0	3	2	0	0	0	0	0	1092.8888		1092.8888	12	91.0741	12.5891
0	3	3	0	0	0	0	0	1128.4087		1128.4087	12	92.3674	14.8825
0	3	4	0	0	0	0	0	1087.8556		1087.8556	12	88.9880	10.5030
0	3	5	0	0	0	0	0	1103.3582		1103.3582	12	91.9465	13.4616
								8	22566.8918				
1	1	1	0	0	0	0	0	201.2543		201.2543	3	67.0848	-11.4002
1	1	2	0	0	0	0	0	202.4200		202.4200	3	67.4733	-11.0116
1	1	3	0	0	0	0	0	201.4446		201.4446	3	67.1482	-11.3367
1	1	4	0	0	0	0	0	252.2613		252.2613	3	84.1204	3.6355
1	1	5	0	0	0	0	0	249.1887		249.1887	3	83.0899	4.5550
1	2	3	0	0	0	0	0	250.2737		250.2737	3	83.4246	4.9396
1	2	4	0	0	0	0	0	248.0421		248.0421	3	82.6807	4.1958
1	2	5	0	0	0	0	0	248.2494		248.2494	3	82.7498	4.2649
1	3	1	0	0	0	0	0	284.4988		284.4988	3	94.8329	16.3480
1	3	5	0	0	0	0	0	287.0413		287.0413	3	95.6804	17.1955
2	1	1	0	0	0	0	0	194.9213		194.9213	3	64.9738	-13.5112
2	1	2	0	0	0	0	0	194.9213		194.9213	3	64.9738	-13.5112
2	1	3	0	0	0	0	0	194.9213		194.9213	3	64.9738	-13.5112
2	1	4	0	0	0	0	0	194.9213		194.9213	3	64.9738	-13.5112
2	1	5	0	0	0	0	0	194.9213		194.9213	3	64.9738	-13.5112
2	2	1	0	0	0	0	0	245.7254		245.7254	3	81.9085	3.4235
2	2	2	0	0	0	0	0	237.9571		237.9571	3	79.1857	0.7008
2	2	3	0	0	0	0	0	237.9571		237.9571	3	79.1857	0.7008
2	2	4	0	0	0	0	0	237.9571		237.9571	3	79.1857	0.7008
2	2	5	0	0	0	0	0	237.9571		237.9571	3	79.1857	0.7008
2	3	1	0	0	0	0	0	282.7703		282.7703	3	94.2568	15.7718
2	3	2	0	0	0	0	0	277.5583		277.5583	3	92.5194	14.0345
2	3	3	0	0	0	0	0	283.7420		283.7420	3	94.5807	16.0957
2	3	4	0	0	0	0	0	277.5583		277.5583	3	92.5194	14.0345
2	3	5	0	0	0	0	0	277.5583		277.5583	3	92.5194	14.0345
3	1	1	0	0	0	0	0	187.7089		187.7089	3	62.5690	-13.9160
3	1	3	0	0	0	0	0	195.1806		195.1806	3	65.0602	-13.4247
3	1	4	0	0	0	0	0	181.1920		181.1920	3	60.3973	-18.0874
3	1	5	0	0	0	0	0	181.1920		181.1920	3	60.3973	-18.0874
3	2	1	0	0	0	0	0	181.1920		181.1920	3	60.3973	-18.0874
3	2	2	0	0	0	0	0	181.1920		181.1920	3	60.3973	-18.0874

TABLE 8.2-3 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE m/BQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	2	3	0	0	0	0	0	240.4932		240.4932	3	80.1511	1.6661
3	2	4	0	0	0	0	0	226.3420		226.3420	3	75.4479	-3.0376
3	2	5	0	0	0	0	0	232.3714		232.3714	3	77.4571	-1.0278
3	3	1	0	0	0	0	0	264.1444		264.1444	3	88.0488	9.2439
3	3	2	0	0	0	0	0	268.9905		268.9905	3	89.6968	9.8139
3	3	3	0	0	0	0	0	273.8762		273.8762	3	91.2884	12.4408
3	3	4	0	0	0	0	0	253.7176		253.7176	3	84.5725	6.0076
3	3	5	0	0	0	0	0	268.0912		268.0912	3	89.3437	10.4788
4	1	1	0	0	0	0	0	186.1348		186.1348	3	62.0449	-16.4400
4	1	2	0	0	0	0	0	184.9822		184.9822	3	62.3274	-14.1975
4	1	3	0	0	0	0	0	194.6819		194.6819	3	64.8940	-13.5910
4	1	4	0	0	0	0	0	182.7211		182.7211	3	60.9070	-17.5779
4	1	5	0	0	0	0	0	187.5999		187.5999	3	62.5333	-15.9514
4	2	1	0	0	0	0	0	230.9982		230.9982	3	76.9994	-1.4855
4	2	2	0	0	0	0	0	224.8062		224.8062	3	75.6021	-2.8829
4	2	3	0	0	0	0	0	238.4293		238.4293	3	79.4898	1.5048
4	2	4	0	0	0	0	0	221.3887		221.3887	3	73.7966	-4.6804
4	2	5	0	0	0	0	0	231.7525		231.7525	3	77.2508	-1.2942
4	3	1	0	0	0	0	0	263.1173		263.1173	3	87.7058	9.2208
4	3	2	0	0	0	0	0	262.5927		262.5927	3	87.5309	9.0460
4	3	3	0	0	0	0	0	270.5257		270.5257	3	90.1752	11.6903
4	3	4	0	0	0	0	0	251.1413		251.1413	3	83.7138	5.2288
4	3	5	0	0	0	0	0	266.7041		266.7041	3	88.9014	10.4164
24								24173.9401					

TABLE 8.2-3 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SUMMARY OF ANALYSIS									TELEPS H-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE				
	SOURCE								DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	F	F _{0.05}
	A	B	C	D	E	F	G	H					
A	1	0	0	0	0	0	0	0	3	1364.2413	454.7471	57.41	* 2.00
B	0	1	0	0	0	0	0	0	2	22307.5179	11153.7589	1408.00	* 3.01
C	0	0	1	0	0	0	0	0	4	225.5549	56.3892	7.22	* 2.45
AB	1	1	0	0	0	0	0	0	6	119.0910	19.8475	2.38	* 2.18
AC	1	0	1	0	0	0	0	0	12	97.2568	8.1047	1.08	1.85
BC	0	1	1	0	0	0	0	0	8	33.8170	4.2271	<4.1	2.02
ABC	1	1	1	0	0	0	0	0	24	25.7192	1.0716	<4.1	1.61
RESIDUAL									120	950.5394	7.9212		

A - TIME

B - TEMP

C - BATCH

TABLE 8.2-4 TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER

ANALYSIS OF VARIANCE								TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER			
A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	0	0	0	0	0	0.27438	0.27438	0.02314	3
1	1	2	0	0	0	0	0	0.26910	0.26910	0.02415	3
1	1	3	0	0	0	0	0	0.27194	0.27194	0.02445	3
1	1	4	0	0	0	0	0	0.25706	0.25706	0.02203	3
1	1	5	0	0	0	0	0	0.26821	0.26821	0.02399	3
1	2	1	0	0	0	0	0	0.36298	0.36298	0.04398	3
1	2	2	0	0	0	0	0	0.35419	0.35419	0.04422	3
1	2	3	0	0	0	0	0	0.35124	0.35124	0.04123	3
1	2	4	0	0	0	0	0	0.34794	0.34794	0.04084	3
1	2	5	0	0	0	0	0	0.35824	0.35824	0.04520	3
1	3	1	0	0	0	0	0	0.46854	0.46854	0.07338	3
1	3	2	0	0	0	0	0	0.48489	0.48489	0.07857	3
1	3	3	0	0	0	0	0	0.48288	0.48288	0.08029	3
1	3	4	0	0	0	0	0	0.42042	0.42042	0.05993	3
1	3	5	0	0	0	0	0	0.43882	0.43882	0.06429	3
2	1	1	0	0	0	0	0	0.25432	0.25432	0.02157	3
2	1	2	0	0	0	0	0	0.25578	0.25578	0.02181	3
2	1	3	0	0	0	0	0	0.26107	0.26107	0.02273	3
2	1	4	0	0	0	0	0	0.25198	0.25198	0.02117	3
2	1	5	0	0	0	0	0	0.25487	0.25487	0.02144	3
2	2	1	0	0	0	0	0	0.34891	0.34891	0.05944	3
2	2	2	0	0	0	0	0	0.33520	0.33520	0.05745	3
2	2	3	0	0	0	0	0	0.33031	0.33031	0.05638	3
2	2	4	0	0	0	0	0	0.32731	0.32731	0.05571	3
2	2	5	0	0	0	0	0	0.34397	0.34397	0.06048	3
2	3	1	0	0	0	0	0	0.43939	0.43939	0.06434	3
2	3	2	0	0	0	0	0	0.42834	0.42834	0.06118	3
2	3	3	0	0	0	0	0	0.42080	0.42080	0.05904	3
2	3	4	0	0	0	0	0	0.40713	0.40713	0.05530	3
2	3	5	0	0	0	0	0	0.41335	0.41335	0.05702	3
3	1	1	0	0	0	0	0	0.24229	0.24229	0.02297	3
3	1	2	0	0	0	0	0	0.24389	0.24389	0.01984	3
3	1	3	0	0	0	0	0	0.25297	0.25297	0.02184	3
3	1	4	0	0	0	0	0	0.24838	0.24838	0.02068	3
3	1	5	0	0	0	0	0	0.24306	0.24306	0.01970	3
3	2	1	0	0	0	0	0	0.33679	0.33679	0.05784	3
3	2	2	0	0	0	0	0	0.32100	0.32100	0.05489	3
3	2	3	0	0	0	0	0	0.32383	0.32383	0.05497	3
3	2	4	0	0	0	0	0	0.31980	0.31980	0.05418	3
3	2	5	0	0	0	0	0	0.32614	0.32614	0.05530	3
3	3	1	0	0	0	0	0	0.42284	0.42284	0.05970	3
3	3	2	0	0	0	0	0	0.41760	0.41760	0.05825	3
3	3	3	0	0	0	0	0	0.41909	0.41909	0.05888	3
3	3	4	0	0	0	0	0	0.41983	0.41983	0.05912	3
3	3	5	0	0	0	0	0	0.43484	0.43484	0.06384	3
4	1	1	0	0	0	0	0	0.25488	0.25488	0.02172	3
4	1	2	0	0	0	0	0	0.24717	0.24717	0.02038	3
4	1	3	0	0	0	0	0	0.26083	0.26083	0.02249	3
4	1	4	0	0	0	0	0	0.24411	0.24411	0.02191	3
4	1	5	0	0	0	0	0	0.24535	0.24535	0.02088	3
4	2	1	0	0	0	0	0	0.34093	0.34093	0.05878	3
4	2	2	0	0	0	0	0	0.32272	0.32272	0.05477	3
4	2	3	0	0	0	0	0	0.31732	0.31732	0.05358	3
4	2	4	0	0	0	0	0	0.34034	0.34034	0.05887	3
4	2	5	0	0	0	0	0	0.32628	0.32628	0.05888	3
4	3	1	0	0	0	0	0	0.43349	0.43349	0.06289	3
4	3	2	0	0	0	0	0	0.43349	0.43349	0.06289	3

TABLE 8.2-4 TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
4	3	5	0	0	0	0	0	0.42183	0.42183	0.07721	3
4	3	4	0	0	0	0	0	0.47742	0.47742	0.07721	3
4	3	5	0	0	0	0	0	0.44686	0.44686	0.06726	3

ANALYSIS OF VARIANCE											
TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER											
SOURCE				DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F	
BETWEEN				30		0.1202		0.0040		23.442	
WITHIN				120		0.0104		0.0001			
TOTAL				172		0.1306					

A	B	C	D	E	F	G	H	SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
1	0	0	0	0	0	0	0	5.3994		5.3994	45	0.1200	0.0052
2	0	0	0	0	0	0	0	5.0677		5.0677	45	0.1126	-0.0022
3	0	0	0	0	0	0	0	5.0939		5.0939	45	0.1132	-0.0016
4	0	0	0	0	0	0	0	5.1887		5.1887	45	0.1133	-0.0014
3									0.0016				
0	1	0	0	0	0	0	0	5.1183		5.1183	60	0.0853	-0.0295
0	2	0	0	0	0	0	0	6.7501		6.7501	60	0.1125	-0.0023
0	3	0	0	0	0	0	0	8.7932		8.7932	60	0.1466	0.0318
2									0.1130				
0	0	1	0	0	0	0	0	4.1947		4.1947	36	0.1165	0.0017
0	0	2	0	0	0	0	0	4.1141		4.1141	36	0.1143	-0.0005
0	0	3	0	0	0	0	0	4.0881		4.0881	36	0.1134	-0.0014
0	0	4	0	0	0	0	0	4.1883		4.1883	36	0.1155	0.0007
0	0	5	0	0	0	0	0	4.1115		4.1115	36	0.1142	-0.0004
4									0.0002				
1	1	0	0	0	0	0	0	1.3406		1.3406	15	0.0894	-0.0254
1	2	0	0	0	0	0	0	1.7942		1.7942	15	0.1196	0.0048
1	3	0	0	0	0	0	0	2.2043		2.2043	15	0.1510	0.0362
2	1	0	0	0	0	0	0	1.2780		1.2780	15	0.0852	-0.0296
2	2	0	0	0	0	0	0	1.6807		1.6807	15	0.1120	-0.0027
2	3	0	0	0	0	0	0	2.1090		2.1090	15	0.1406	0.0258
3	1	0	0	0	0	0	0	1.2886		1.2886	15	0.0894	-0.0254
3	2	0	0	0	0	0	0	1.6276		1.6276	15	0.1088	-0.0043
3	3	0	0	0	0	0	0	2.2157		2.2157	15	0.1477	0.0329
4	1	0	0	0	0	0	0	1.2491		1.2491	15	0.0833	-0.0313
4	2	0	0	0	0	0	0	1.6476		1.6476	15	0.1098	-0.0049
4	3	0	0	0	0	0	0	2.2040		2.2040	15	0.1449	0.0321
5									0.1138				
1	0	1	0	0	0	0	0	1.1058		1.1058	9	0.1229	0.0081
1	0	2	0	0	0	0	0	1.1182		1.1182	9	0.1242	0.0095
1	0	3	0	0	0	0	0	1.0750		1.0750	9	0.1194	0.0047
1	0	4	0	0	0	0	0	1.0830		1.0830	9	0.1189	-0.0009
1	0	5	0	0	0	0	0	1.0753		1.0753	9	0.1195	0.0047
2	0	1	0	0	0	0	0	1.0374		1.0374	9	0.1133	0.0005
2	0	2	0	0	0	0	0	1.0193		1.0193	9	0.1133	-0.0015
2	0	3	0	0	0	0	0	1.0122		1.0122	9	0.1125	-0.0023
2	0	4	0	0	0	0	0	0.9844		0.9844	9	0.1094	-0.0052
2	0	5	0	0	0	0	0	1.0122		1.0122	9	0.1125	-0.0023
3	0	1	0	0	0	0	0	1.0122		1.0122	9	0.1125	-0.0023
3	0	2	0	0	0	0	0	1.0122		1.0122	9	0.1125	-0.0023

TABLE 8.2-4 TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE FUEL/HP	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	0	3	0	0	0	0	0	1.0055		1.0055	9	0.1107	-0.0041
3	0	4	0	0	0	0	0	1.0000		1.0000	9	0.1209	0.0061
3	0	5	0	0	0	0	0	1.0055		1.0055	9	0.1117	-0.0031
4	0	1	0	0	0	0	0	1.0055		1.0055	9	0.1144	-0.0004
4	0	2	0	0	0	0	0	0.9941		0.9941	9	0.1103	-0.0043
4	0	3	0	0	0	0	0	1.0000		1.0000	9	0.1111	-0.0037
4	0	4	0	0	0	0	0	1.0589		1.0589	9	0.1177	0.0029
4	0	5	0	0	0	0	0	1.0185		1.0185	9	0.1132	-0.0016
12								0.0034					
0	1	1	0	0	0	0	0	1.0456		1.0456	12	0.0871	-0.0277
0	1	2	0	0	0	0	0	1.0159		1.0159	12	0.0847	-0.0301
0	1	3	0	0	0	0	0	1.0468		1.0468	12	0.0872	-0.0276
0	1	4	0	0	0	0	0	0.9985		0.9985	12	0.0832	-0.0316
0	1	5	0	0	0	0	0	1.0513		1.0513	12	0.0903	-0.0309
0	2	1	0	0	0	0	0	1.0046		1.0046	12	0.1154	0.0006
0	2	2	0	0	0	0	0	1.0431		1.0431	12	0.1119	-0.0029
0	2	3	0	0	0	0	0	1.3227		1.3227	12	0.1102	-0.0046
0	2	4	0	0	0	0	0	1.3350		1.3350	12	0.1113	-0.0035
0	2	5	0	0	0	0	0	1.3644		1.3644	12	0.1137	-0.0011
0	3	1	0	0	0	0	0	1.7850		1.7850	12	0.1463	0.0215
0	3	2	0	0	0	0	0	1.7550		1.7550	12	0.1443	0.0200
0	3	3	0	0	0	0	0	1.8248		1.8248	12	0.1521	0.0373
0	3	4	0	0	0	0	0	1.7354		1.7354	12	0.1446	0.0298
8								0.1140					
1	1	1	0	0	0	0	0	0.2748		0.2748	3	0.0914	-0.0234
1	1	2	0	0	0	0	0	0.2691		0.2691	3	0.0897	-0.0251
1	1	3	0	0	0	0	0	0.2719		0.2719	3	0.0906	-0.0241
1	1	4	0	0	0	0	0	0.2571		0.2571	3	0.0857	-0.0291
1	1	5	0	0	0	0	0	0.2882		0.2882	3	0.0994	-0.0234
1	2	1	0	0	0	0	0	0.3630		0.3630	3	0.1210	0.0062
1	2	2	0	0	0	0	0	0.3642		0.3642	3	0.1214	0.0066
1	2	3	0	0	0	0	0	0.3513		0.3513	3	0.1171	0.0023
1	2	4	0	0	0	0	0	0.3476		0.3476	3	0.1159	0.0011
1	2	5	0	0	0	0	0	0.3682		0.3682	3	0.1227	0.0080
1	3	1	0	0	0	0	0	0.4688		0.4688	3	0.1562	0.0414
1	3	2	0	0	0	0	0	0.4849		0.4849	3	0.1616	0.0468
1	3	3	0	0	0	0	0	0.4518		0.4518	3	0.1506	0.0358
1	3	4	0	0	0	0	0	0.4204		0.4204	3	0.1401	0.0254
1	3	5	0	0	0	0	0	0.4388		0.4388	3	0.1463	0.0315
2	1	1	0	0	0	0	0	0.2543		0.2543	3	0.0848	-0.0300
2	1	2	0	0	0	0	0	0.2691		0.2691	3	0.0897	-0.0251
2	1	3	0	0	0	0	0	0.2611		0.2611	3	0.0870	-0.0278
2	1	4	0	0	0	0	0	0.2520		0.2520	3	0.0840	-0.0308
2	1	5	0	0	0	0	0	0.2549		0.2549	3	0.0850	-0.0298
2	2	1	0	0	0	0	0	0.3439		0.3439	3	0.1146	-0.0002
2	2	2	0	0	0	0	0	0.3352		0.3352	3	0.1117	-0.0031
2	2	3	0	0	0	0	0	0.3305		0.3305	3	0.1101	-0.0047
2	2	4	0	0	0	0	0	0.3273		0.3273	3	0.1091	-0.0057
2	2	5	0	0	0	0	0	0.3440		0.3440	3	0.1147	-0.0001
2	3	1	0	0	0	0	0	0.4394		0.4394	3	0.1465	0.0317
2	3	2	0	0	0	0	0	0.4284		0.4284	3	0.1428	0.0280
2	3	3	0	0	0	0	0	0.4208		0.4208	3	0.1403	0.0255
2	3	4	0	0	0	0	0	0.4071		0.4071	3	0.1387	0.0209
2	3	5	0	0	0	0	0	0.4133		0.4133	3	0.1378	0.0230
3	1	1	0	0	0	0	0	0.2423		0.2423	3	0.0874	-0.0274
3	1	2	0	0	0	0	0	0.2439		0.2439	3	0.0813	-0.0335
3	1	3	0	0	0	0	0	0.2530		0.2530	3	0.0843	-0.0305
3	1	4	0	0	0	0	0	0.2484		0.2484	3	0.0828	-0.0320
3	1	5	0	0	0	0	0	0.2431		0.2431	3	0.0810	-0.0338
3	2	1	0	0	0	0	0	0.3346		0.3346	3	0.1123	-0.0025
3	2	2	0	0	0	0	0	0.3318		0.3318	3	0.1109	-0.0078

TABLE 8.2-4 TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM XI	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN XI	EFFECT XI
A	B	C	D	E	F	G	H						
3	1	1	0	0	0	0	0	0.3238		0.3238	3	0.1079	-0.0000
3	2	4	0	0	0	0	0	0.3198		0.3198	3	0.1066	-0.0002
3	2	5	0	0	0	0	0	0.3261		0.3261	3	0.1087	-0.0061
3	3	1	0	0	0	0	0				3	0.1079	-0.0000
3	3	2	0	0	0	0	0				3	0.1066	-0.0002
3	3	3	0	0	0	0	0				3	0.1087	-0.0061
3	3	4	0	0	0	0	0	0.3198		0.3198	3	0.1073	0.0583
3	3	5	0	0	0	0	0	0.4363		0.4363	3	0.1454	0.0307
4	1	1	0	0	0	0	0	0.2547		0.2547	3	0.0849	-0.0299
4	1	2	0	0	0	0	0	0.2478		0.2478	3	0.0834	-0.0124
4	1	3	0	0	0	0	0	0.2408		0.2408	3	0.0809	-0.0278
4	1	4	0	0	0	0	0	0.2441		0.2441	3	0.0804	-0.0244
4	1	5	0	0	0	0	0	0.2453		0.2453	3	0.0818	-0.0330
4	2	1	0	0	0	0	0	0.3409		0.3409	3	0.1136	-0.0011
4	2	2	0	0	0	0	0	0.3227		0.3227	3	0.1076	-0.0072
4	2	3	0	0	0	0	0	0.3378		0.3378	3	0.1098	-0.0090
4	2	4	0	0	0	0	0	0.3403		0.3403	3	0.1134	-0.0013
4	2	5	0	0	0	0	0	0.3388		0.3388	3	0.1088	-0.0040
4	3	1	0	0	0	0	0	0.4337		0.4337	3	0.1444	0.0298
4	3	2	0	0	0	0	0	0.4242		0.4242	3	0.1414	0.0266
4	3	3	0	0	0	0	0	0.4218		0.4218	3	0.1406	0.0258
4	3	4	0	0	0	0	0	0.4444		0.4444	3	0.1488	0.0444
4	3	5	0	0	0	0	0	0.4444		0.4444	3	0.1488	0.0442
24									0.1202				

TABLE 8.2-4 TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

	SOURCE									DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	F	F > F _{0.05}
	A	B	C	D	E	F	G	H						
A	1	0	0	0	0	0	0	0	3	0.0016	0.000533	6.15	*	2.88
B	0	1	0	0	0	0	0	0	2	0.1130	0.056500	651.67	*	3.07
C	0	0	1	0	0	0	0	0	4	0.0002	0.000050	< 1		2.45
AB	1	1	0	0	0	0	0	0	6	0.0007	0.000117	1.89		2.18
AC	1	0	1	0	0	0	0	0	12	0.0016	0.000133	1.53		1.83
BC	0	1	1	0	0	0	0	0	8	0.0007	0.000088	1.01		2.02
ABC	1	1	1	0	0	0	0	0	24	0.0024	0.000100	1.15		1.61
RESIDUAL									120	0.0104	0.0000867			

A = TIME

B = TEMP

C = BATCH

TABLE 8.2-5 TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE

ANALYSIS OF VARIANCE								TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE			
A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	0	0	0	0	0	33.54160	33.54160	376.2385	3
1	1	2	0	0	0	0	0	38.49440	38.49440	494.18544	3
1	1	3	0	0	0	0	0	37.38380	37.38380	467.03670	3
1	1	4	0	0	0	0	0	34.88280	34.88280	422.65243	3
1	1	5	0	0	0	0	0	36.86910	36.86910	453.81338	3
1	2	1	0	0	0	0	0	35.37430	35.37430	425.54337	3
1	2	2	0	0	0	0	0	41.88200	41.88200	584.95012	3
1	2	3	0	0	0	0	0	39.87320	39.87320	530.14657	3
1	2	4	0	0	0	0	0	38.83490	38.83490	502.73884	3
1	2	5	0	0	0	0	0	40.47800	40.47800	564.73112	3
1	3	1	0	0	0	0	0	41.31990	41.31990	569.44553	3
1	3	2	0	0	0	0	0	44.45330	44.45330	659.06478	3
1	3	3	0	0	0	0	0	43.58940	43.58940	633.42974	3
1	3	4	0	0	0	0	0	42.10620	42.10620	591.22028	3
1	3	5	0	0	0	0	0	42.64230	42.64230	606.82829	3
2	1	1	0	0	0	0	0	34.06380	34.06380	493.02594	3
2	1	2	0	0	0	0	0	32.28220	32.28220	347.99211	3
2	1	3	0	0	0	0	0	29.65550	29.65550	295.20454	3
2	1	4	0	0	0	0	0	29.35100	29.35100	287.29968	3
2	1	5	0	0	0	0	0	28.40510	28.40510	217.86559	3
2	2	1	0	0	0	0	0	30.25540	30.25540	307.98952	3
2	2	2	0	0	0	0	0	33.97420	33.97420	485.94764	3
2	2	3	0	0	0	0	0	30.35520	30.35520	311.04634	3
2	2	4	0	0	0	0	0	23.74030	23.74030	189.30987	3
2	2	5	0	0	0	0	0	27.76410	27.76410	268.48551	3
2	3	1	0	0	0	0	0	39.53970	39.53970	426.74998	3
2	3	2	0	0	0	0	0	39.11250	39.11250	510.47634	3
2	3	3	0	0	0	0	0	34.24230	34.24230	391.49132	3
2	3	4	0	0	0	0	0	35.65270	35.65270	424.14268	3
2	3	5	0	0	0	0	0	33.63640	33.63640	377.66367	3
3	1	1	0	0	0	0	0	25.81480	25.81480	225.23898	3
3	1	2	0	0	0	0	0	28.23620	28.23620	265.78993	3
3	1	3	0	0	0	0	0	24.32060	24.32060	198.04353	3
3	1	4	0	0	0	0	0	28.05478	28.05478	244.37802	3
3	1	5	0	0	0	0	0	24.80100	24.80100	205.11839	3
3	2	1	0	0	0	0	0	29.44780	29.44780	291.10187	3
3	2	2	0	0	0	0	0	28.98020	28.98020	281.08470	3
3	2	3	0	0	0	0	0	28.44790	28.44790	278.46150	3
3	2	4	0	0	0	0	0	27.42778	27.42778	252.88221	3
3	2	5	0	0	0	0	0	29.90880	29.90880	391.01713	3
3	3	1	0	0	0	0	0	32.09110	32.09110	346.36577	3
3	3	2	0	0	0	0	0	32.53470	32.53470	353.91525	3
3	3	3	0	0	0	0	0	30.48540	30.48540	310.89733	3
3	3	4	0	0	0	0	0	30.25640	30.25640	295.88968	3
3	3	5	0	0	0	0	0	32.58870	32.58870	380.58444	3
4	1	1	0	0	0	0	0	24.14840	24.14840	197.78925	3
4	1	2	0	0	0	0	0	27.55580	27.55580	255.32567	3
4	1	3	0	0	0	0	0	23.81660	23.81660	189.52937	3
4	1	4	0	0	0	0	0	28.03450	28.03450	276.97222	3
4	1	5	0	0	0	0	0	21.98860	21.98860	185.48463	3
4	2	1	0	0	0	0	0	30.46590	30.46590	315.13516	3
4	2	2	0	0	0	0	0	29.66590	29.66590	293.91990	3
4	2	3	0	0	0	0	0	29.09740	29.09740	285.38471	3
4	2	4	0	0	0	0	0	27.75570	27.75570	260.67210	3
4	2	5	0	0	0	0	0	25.72340	25.72340	221.23684	3
4	3	1	0	0	0	0	0	29.54440	29.54440	291.78619	3
4	3	2	0	0	0	0	0	30.22240	30.22240	303.10993	3
4	3	3	0	0	0	0	0	31.28840	31.28840	320.38228	3

TABLE 8.2-5 TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

A	B	C	D	E	F	G	H	X1	X3	X1X2	N
4	3	4	0	0	0	0	0	29.22300	29.22300	285.05628	3
4	3	5	0	0	0	0	0	30.92330	30.92330	329.72966	3

ANALYSIS OF VARIANCE TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE											
SOURCE		DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F			
BETWEEN		59		650.8555		11.0314		10.695			
WITHIN		120		123.7782		1.0315					
TOTAL		179		774.6338							

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	0	0	0	0	0	0	0	593.6960		593.6960	45	13.1932	2.6086
2	0	0	0	0	0	0	0	464.8254		464.8254	45	10.3295	-0.2551
3	0	0	0	0	0	0	0	427.1897		427.1897	45	9.4931	-1.0915
4	0	0	0	0	0	0	0	419.5165		419.5165	45	9.3226	-1.2620
3									434.4372				
0	1	0	0	0	0	0	0	580.6133		580.6133	60	9.6769	-0.9077
0	2	0	0	0	0	0	0	623.4536		623.4536	60	10.3909	-0.1937
0	3	0	0	0	0	0	0	701.1607		701.1607	60	11.6860	1.1014
2									124.4742				
0	0	1	0	0	0	0	0	371.4225		371.4225	36	10.3173	-0.2673
0	0	2	0	0	0	0	0	407.4068		407.4068	36	11.3169	0.7323
0	0	3	0	0	0	0	0	382.6287		382.6287	36	10.6286	0.0440
0	0	4	0	0	0	0	0	377.2707		377.2707	36	10.4797	-0.1049
0	0	5	0	0	0	0	0	366.4989		366.4989	36	10.1805	-0.4041
4									28.2189				
1	1	0	0	0	0	0	0	183.1209		183.1209	15	12.2081	1.6235
1	2	0	0	0	0	0	0	196.4440		196.4440	15	13.0963	2.5117
1	3	0	0	0	0	0	0	214.1311		214.1311	15	14.2754	3.6908
2	1	0	0	0	0	0	0	140.7576		140.7576	15	9.3838	-1.2008
2	2	0	0	0	0	0	0	146.0892		146.0892	15	9.7393	-0.8453
2	3	0	0	0	0	0	0	177.9786		177.9786	15	11.8652	1.2806
3	1	0	0	0	0	0	0	131.2293		131.2293	15	8.7486	-1.8360
3	2	0	0	0	0	0	0	138.2121		138.2121	15	9.2141	-1.3705
3	3	0	0	0	0	0	0	157.7483		157.7483	15	10.5166	-0.0680
4	1	0	0	0	0	0	0	125.5055		125.5055	15	8.3670	-2.2176
4	2	0	0	0	0	0	0	142.7083		142.7083	15	9.5139	-1.0707
4	3	0	0	0	0	0	0	151.3027		151.3027	15	10.0868	-0.4978
6									568.9196				
1	0	1	0	0	0	0	0	110.2358		110.2358	9	12.2484	1.6638
1	0	2	0	0	0	0	0	124.8327		124.8327	9	13.8703	3.2857
1	0	3	0	0	0	0	0	120.8484		120.8484	9	13.4276	2.8430
1	0	4	0	0	0	0	0	117.7727		117.7727	9	13.0859	2.5013
1	0	5	0	0	0	0	0	120.0044		120.0044	9	13.3340	2.7494
2	0	1	0	0	0	0	0	89.6539		89.6539	9	9.9615	-0.6231
2	0	2	0	0	0	0	0	105.3689		105.3689	9	11.7077	1.1231
2	0	3	0	0	0	0	0	94.2530		94.2530	9	10.4786	-0.1120
2	0	4	0	0	0	0	0	88.7440		88.7440	9	9.8604	-0.7242
2	0	5	0	0	0	0	0	86.8056		86.8056	9	9.6451	-0.9395
3	0	1	0	0	0	0	0	87.3537		87.3537	9	9.7060	-0.8786
3	0	2	0	0	0	0	0	89.7511		89.7511	9	9.8723	-0.6123
3	0	3	0	0	0	0	0	88.2539		88.2539	9	9.8904	-1.3342

TABLE 8.2-5 TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE RUM/8Q	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	0	4	0	0	0	0	0	85.7408		85.7408	9	9.5266	-1.0578
3	0	5	0	0	0	0	0	81.0902		81.0902		9.0100	-1.5746
4	0	1	0	0	0	0	0	84.1791		84.1791	9	9.3532	-1.2314
4	0	2	0	0	0	0	0	87.4541		87.4541	9	9.7171	-0.8675
4	0	3	0	0	0	0	0	84.2734		84.2734	9	9.2637	-1.2209
4	0	4	0	0	0	0	0	82.0132		82.0132	9	9.4459	-1.1387
4	0	5	0	0	0	0	0	78.5967		78.5967	9	8.7330	-1.8516
12									481.8719				
0	1	1	0	0	0	0	0	107.5688		107.5688	12	8.9641	-1.6205
0	1	2	0	0	0	0	0	126.5686		126.5686	12	10.5474	-0.0372
0	1	3	0	0	0	0	0	115.1765		115.1765	12	9.5980	-0.9866
0	1	4	0	0	0	0	0	122.2742		122.2742	12	10.1895	-0.3951
0	1	5	0	0	0	0	0	109.0252		109.0252	12	9.0854	-1.4992
0	2	1	0	0	0	0	0	125.5434		125.5434	12	10.4619	-0.1224
0	2	2	0	0	0	0	0	134.5053		134.5053	12	11.2088	0.6242
0	2	3	0	0	0	0	0	127.7757		127.7757	12	10.6480	0.0634
0	2	4	0	0	0	0	0	117.7582		117.7582	12	9.8132	-0.7714
0	2	5	0	0	0	0	0	117.8710		117.8710	12	9.8226	-0.7620
0	3	1	0	0	0	0	0	138.3103		138.3103	12	11.5259	0.9413
0	3	2	0	0	0	0	0	146.3329		146.3329	12	12.1944	1.6098
0	3	3	0	0	0	0	0	139.6765		139.6765	12	11.6397	1.0551
0	3	4	0	0	0	0	0	137.2383		137.2383	12	11.4365	0.8519
0	3	5	0	0	0	0	0	139.6027		139.6027	12	11.6336	1.0490
8									168.0672				
1	1	1	0	0	0	0	0	33.5416		33.5416	3	11.1809	0.5959
1	1	2	0	0	0	0	0	38.4944		38.4944	3	12.8315	2.2469
1	1	3	0	0	0	0	0	37.3838		37.3838	3	12.4613	1.8767
1	1	4	0	0	0	0	0	36.8320		36.8320	3	12.2773	1.6927
1	1	5	0	0	0	0	0	36.8691		36.8691	3	12.2897	1.7051
1	2	1	0	0	0	0	0	35.3743		35.3743	3	11.7914	1.2068
1	2	2	0	0	0	0	0	41.8880		41.8880	3	13.9617	3.3771
1	2	3	0	0	0	0	0	39.8752		39.8752	3	13.2917	2.7071
1	2	4	0	0	0	0	0	38.8345		38.8345	3	12.9448	2.3602
1	2	5	0	0	0	0	0	40.4750		40.4750	3	13.4917	2.9071
1	3	1	0	0	0	0	0	41.3199		41.3199	3	13.7733	3.1887
1	3	2	0	0	0	0	0	44.4533		44.4533	3	14.8178	4.2332
1	3	3	0	0	0	0	0	43.5894		43.5894	3	14.5298	3.9452
1	3	4	0	0	0	0	0	42.1062		42.1062	3	14.0354	3.4508
1	3	5	0	0	0	0	0	42.6623		42.6623	3	14.2208	3.6362
2	1	1	0	0	0	0	0	24.0638		24.0638	3	8.0213	-2.5633
2	1	2	0	0	0	0	0	32.2822		32.2822	3	10.7607	0.1761
2	1	3	0	0	0	0	0	29.6555		29.6555	3	9.8852	-0.6994
2	1	4	0	0	0	0	0	29.3510		29.3510	3	9.7837	-0.8009
2	1	5	0	0	0	0	0	25.4051		25.4051	3	8.4684	-2.1162
2	2	1	0	0	0	0	0	30.2554		30.2554	3	10.0851	-0.4995
2	2	2	0	0	0	0	0	33.9742		33.9742	3	11.3247	0.7401
2	2	3	0	0	0	0	0	30.3552		30.3552	3	10.1184	-0.4662
2	2	4	0	0	0	0	0	23.7403		23.7403	3	7.9134	-2.6712
2	2	5	0	0	0	0	0	27.7641		27.7641	3	9.2547	-1.3299
2	3	1	0	0	0	0	0	35.3347		35.3347	3	11.7762	1.1936
2	3	2	0	0	0	0	0	39.1125		39.1125	3	13.0375	2.4529
2	3	3	0	0	0	0	0	34.2423		34.2423	3	11.4141	0.8295
2	3	4	0	0	0	0	0	35.6527		35.6527	3	11.8842	1.2996
2	3	5	0	0	0	0	0	33.6364		33.6364	3	11.2121	0.6275
3	1	1	0	0	0	0	0	25.8148		25.8148	3	8.6048	-1.9797
3	1	2	0	0	0	0	0	28.2362		28.2362	3	9.4121	-1.1725
3	1	3	0	0	0	0	0	24.3206		24.3206	3	8.1069	-2.4777
3	1	4	0	0	0	0	0	28.0567		28.0567	3	9.3522	1.2324
3	1	5	0	0	0	0	0	24.8010		24.8010	3	8.2670	-2.3176
3	2	1	0	0	0	0	0	29.4478		29.4478	3	9.8139	-0.7687
3	2	2	0	0	0	0	0	28.9802		28.9802	3	9.6401	-0.9245
3	2	3	0	0	0	0	0	28.4479		28.4479	3	9.4826	-1.1820

TABLE 8.2-5 TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	2	4	0	0	0	0	0	27.4277		27.4277	3	9.1426	-1.4426
3	2	5	0	0	0	0	0	23.9085		23.9085	3	7.9695	-2.6151
3	3	1	0	0	0	0	0	32.0911		32.0911	3	10.6970	0.1124
3	3	2	0	0	0	0	0	32.5347		32.5347	3	10.8449	0.2603
3	3	3	0	0	0	0	0	30.4854		30.4854	3	10.1618	-0.4228
3	3	4	0	0	0	0	0	30.2564		30.2564	3	10.0855	-0.4991
3	3	5	0	0	0	0	0	32.3807		32.3807	3	10.7936	0.2090
4	1	1	0	0	0	0	0	24.1486		24.1486	3	8.0495	-2.5351
4	1	2	0	0	0	0	0	27.5558		27.5558	3	9.1853	-1.3993
4	1	3	0	0	0	0	0	23.8164		23.8164	3	7.9389	-2.8457
4	1	4	0	0	0	0	0	28.0345		28.0345	3	9.3448	-1.2398
4	1	5	0	0	0	0	0	21.9500		21.9500	3	7.3167	-3.2679
4	2	1	0	0	0	0	0	30.4659		30.4659	3	10.1553	-0.4293
4	2	2	0	0	0	0	0	29.6659		29.6659	3	9.8886	-0.6960
4	2	3	0	0	0	0	0	29.0974		29.0974	3	9.6991	-0.8855
4	2	4	0	0	0	0	0	27.7837		27.7837	3	9.2579	-1.3327
4	2	5	0	0	0	0	0	25.7234		25.7234	3	8.5745	-2.0101
4	3	1	0	0	0	0	0	29.5444		29.5444	3	9.8481	-0.7297
4	3	2	0	0	0	0	0	30.2324		30.2324	3	10.0775	-0.5071
4	3	3	0	0	0	0	0	31.3594		31.3594	3	10.4531	-0.1315
4	3	4	0	0	0	0	0	29.2230		29.2230	3	9.7410	-0.8436
4	3	5	0	0	0	0	0	30.9235		30.9235	3	10.3078	-0.2768
24									459.8395				

TABLE 8.2-5 TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

	SOURCE								DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	F	F 5%
	A	B	C	D	E	F	G	H					
A	1	0	0	0	0	0	0	0	3	434.4372	144.8124	140.39 *	2.58
B	0	1	0	0	0	0	0	0	2	124.4742	62.2371	60.24 *	3.87
C	0	0	1	0	0	0	0	0	4	28.2189	7.0547	6.84 *	2.45
AB	1	1	0	0	0	0	0	0	6	10.0082	1.6680	1.62	2.17
AC	1	0	1	0	0	0	0	0	12	19.2158	1.6013	1.55	1.88
BC	0	1	1	0	0	0	0	0	8	15.3741	1.9218	1.86	2.02
ABC	1	1	1	0	0	0	0	0	24	19.1270	0.7970	<1	1.61
RESIDUAL									120	123.7790	1.0315		

A = TIME

B = TEMP

C = BATCH

TABLE 8.2-6 TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE

ANALYSIS OF VARIANCE								TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE			
A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	0	0	0	0	0	196.91540	196.91540	12926.93082	3
1	1	2	0	0	0	0	0	216.08030	216.08030	14715.74254	3
1	1	3	0	0	0	0	0	201.01430	201.01430	13472.58281	3
1	1	4	0	0	0	0	0	202.25090	202.25090	12476.21273	3
1	1	5	0	0	0	0	0	201.78210	201.78210	13572.03158	3
1	2	1	0	0	0	0	0	243.22060	243.22060	19751.84937	3
1	2	2	0	0	0	0	0	256.47670	256.47670	21927.62904	3
1	2	3	0	0	0	0	0	253.43850	253.43850	21416.46204	3
1	2	4	0	0	0	0	0	249.94680	249.94680	20759.23524	3
1	2	5	0	0	0	0	0	245.62990	245.62990	20783.62335	3
1	3	1	0	0	0	0	0	295.04820	295.04820	29018.48048	3
1	3	2	0	0	0	0	0	298.97240	298.97240	29795.07071	3
1	3	3	0	0	0	0	0	298.38450	298.38450	29678.01413	3
1	3	4	0	0	0	0	0	292.79780	292.79780	28576.39084	3
1	3	5	0	0	0	0	0	293.98990	293.98990	28616.90381	3
2	1	1	0	0	0	0	0	174.42870	174.42870	18146.27917	3
2	1	2	0	0	0	0	0	191.84030	191.84030	12268.10325	3
2	1	3	0	0	0	0	0	187.28120	187.28120	11694.12006	3
2	1	4	0	0	0	0	0	185.15640	185.15640	11428.37115	3
2	1	5	0	0	0	0	0	179.39090	179.39090	10729.65209	3
2	2	1	0	0	0	0	0	228.84020	228.84020	17416.29934	3
2	2	2	0	0	0	0	0	240.15330	240.15330	19236.92567	3
2	2	3	0	0	0	0	0	227.25460	227.25460	17263.43954	3
2	2	4	0	0	0	0	0	213.79230	213.79230	15241.81649	3
2	2	5	0	0	0	0	0	219.99230	219.99230	16164.91203	3
2	3	1	0	0	0	0	0	278.00250	278.00250	25930.45214	3
2	3	2	0	0	0	0	0	287.70410	287.70410	27591.42897	3
2	3	3	0	0	0	0	0	281.21400	281.21400	26381.99749	3
2	3	4	0	0	0	0	0	279.70490	279.70490	26078.91414	3
2	3	5	0	0	0	0	0	276.35230	276.35230	25457.98321	3
3	1	1	0	0	0	0	0	167.97100	167.97100	9405.45683	3
3	1	2	0	0	0	0	0	181.22780	181.22780	10946.03882	3
3	1	3	0	0	0	0	0	172.91800	172.91800	9975.71630	3
3	1	4	0	0	0	0	0	178.99470	178.99470	10883.00484	3
3	1	5	0	0	0	0	0	172.29230	172.29230	9896.40739	3
3	2	1	0	0	0	0	0	223.85620	223.85620	16712.24081	3
3	2	2	0	0	0	0	0	227.34680	227.34680	17245.47961	3
3	2	3	0	0	0	0	0	219.88660	219.88660	16134.31388	3
3	2	4	0	0	0	0	0	214.29590	214.29590	15309.80799	3
3	2	5	0	0	0	0	0	209.77790	209.77790	14716.44488	3
3	3	1	0	0	0	0	0	264.17010	264.17010	23262.04945	3
3	3	2	0	0	0	0	0	271.95490	271.95490	24655.45649	3
3	3	3	0	0	0	0	0	264.33140	264.33140	23291.05493	3
3	3	4	0	0	0	0	0	266.97620	266.97620	23765.04345	3
3	3	5	0	0	0	0	0	257.75260	257.75260	22162.24003	3
4	1	1	0	0	0	0	0	164.93470	164.93470	9069.87122	3
4	1	2	0	0	0	0	0	173.01830	173.01830	9986.74966	3
4	1	3	0	0	0	0	0	169.32220	169.32220	9558.72957	3
4	1	4	0	0	0	0	0	169.19700	169.19700	9545.81970	3
4	1	5	0	0	0	0	0	164.88070	164.88070	9033.84577	3
4	2	1	0	0	0	0	0	214.69400	214.69400	15416.17348	3
4	2	2	0	0	0	0	0	225.10320	225.10320	16902.29010	3
4	2	3	0	0	0	0	0	212.43440	212.43440	15060.32075	3
4	2	4	0	0	0	0	0	210.10610	210.10610	14717.25898	3
4	2	5	0	0	0	0	0	206.95870	206.95870	14279.31562	3
4	3	1	0	0	0	0	0	258.63870	258.63870	23504.04971	3
4	3	2	0	0	0	0	0	266.85260	266.85260	23743.54085	3
4	3	3	0	0	0	0	0	263.88480	263.88480	23071.58972	3

TABLE 8.2-6 TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
4	3	4	0	0	0	0	0	261.80660	261.80660	22856.89973	3
4	3	5	0	0	0	0	0	257.12430	257.12430	22058.29823	3

ANALYSIS OF VARIANCE TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE											
SOURCE		DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F			
BETWEEN		59		33422.1826		566.4777		183.962			
WITHIN		120		369.5176		3.0793					
TOTAL		179		33791.7002							

SOURCE								SUM X1	CRUDE	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H	SUM/80					
1	0	0	0	0	0	0	0	3743.8788	3743.8788	45	83.1973	7.0081	
2	0	0	0	0	0	0	0	3451.8330	3451.8330	45	76.7074	0.5752	
3	0	0	0	0	0	0	0	3289.7544	3289.7544	45	73.1057	-3.0265	
4	0	0	0	0	0	0	0	3218.3274	3218.3274	45	71.5184	-4.6138	
3								3451.2140					
0	1	0	0	0	0	0	0	3645.1202	3645.1202	60	60.7520	-15.3802	
0	2	0	0	0	0	0	0	4542.8570	4542.8570	60	75.7143	-0.4179	
0	3	0	0	0	0	0	0	5515.8159	5515.8159	60	91.9303	15.7981	
2								26178.2877					
0	0	1	0	0	0	0	0	2711.6428	2711.6428	36	75.3234	-0.8088	
0	0	2	0	0	0	0	0	2830.7327	2830.7327	36	78.6315	2.4993	
0	0	3	0	0	0	0	0	2750.6161	2750.6161	36	76.4060	0.2738	
0	0	4	0	0	0	0	0	2734.8274	2734.8274	36	75.6884	-0.6398	
0	0	5	0	0	0	0	0	2689.8739	2689.8739	36	74.6076	-1.9246	
4								342.7553					
1	1	0	0	0	0	0	0	1012.3430	1012.3430	15	67.4895	-8.6427	
1	2	0	0	0	0	0	0	1232.3425	1232.3425	15	82.1488	7.3873	
1	3	0	0	0	0	0	0	1479.1926	1479.1926	15	98.6129	22.4807	
2	1	0	0	0	0	0	0	918.0989	918.0989	15	61.2066	-14.9256	
2	2	0	0	0	0	0	0	1129.7547	1129.7547	15	75.3170	-0.8152	
2	3	0	0	0	0	0	0	1403.9798	1403.9798	15	93.5987	17.4665	
3	1	0	0	0	0	0	0	873.4038	873.4038	15	58.2269	-17.9053	
3	2	0	0	0	0	0	0	1091.1834	1091.1834	15	78.3442	-3.3880	
3	3	0	0	0	0	0	0	1325.1872	1325.1872	15	88.3458	12.2136	
4	1	0	0	0	0	0	0	841.2749	841.2749	15	56.0888	-20.0472	
4	2	0	0	0	0	0	0	1069.5964	1069.5964	15	71.3064	-4.8258	
4	3	0	0	0	0	0	0	1307.4561	1307.4561	15	87.1637	11.0316	
6								32862.6698					
1	0	1	0	0	0	0	0	735.1642	735.1642	9	81.6871	5.5949	
1	0	2	0	0	0	0	0	765.5294	765.5294	9	85.0588	8.9266	
1	0	3	0	0	0	0	0	752.8373	752.8373	9	83.6486	7.5164	
1	0	4	0	0	0	0	0	744.8955	744.8955	9	82.7662	6.6340	
1	0	5	0	0	0	0	0	743.4318	743.4318	9	82.8258	6.6936	
2	0	1	0	0	0	0	0	681.8924	681.8924	9	75.7858	-0.3464	
2	0	2	0	0	0	0	0	719.6997	719.6997	9	79.0446	3.8344	
2	0	3	0	0	0	0	0	695.8518	695.8518	9	77.3149	1.1847	
2	0	4	0	0	0	0	0	678.6536	678.6536	9	75.4060	-0.7262	
2	0	5	0	0	0	0	0	675.7355	675.7355	9	75.0817	-1.0505	
3	0	1	0	0	0	0	0	655.9973	655.9973	9	72.8888	-3.2416	
3	0	2	0	0	0	0	0	680.5295	680.5295	9	75.6144	-0.5178	
3	0	3	0	0	0	0	0	657.1560	657.1560	9	73.0188	-3.1471	

TABLE 8.2-6 TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/W	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	0	4	0	0	0	0	0	560.268		560.268	9	73.3632	-2.7690
3	0	5	0	0	0	0	0	635.8228		635.8228	9	70.6470	-5.4852
4	0	1	0	0	0	0	0	638.5689		638.5689	9	70.9521	-5.1801
4	0	2	0	0	0	0	0	644.9741		644.9741	9	73.8840	-2.2462
4	0	3	0	0	0	0	0	644.7910		644.7910	9	71.6434	-4.4887
4	0	4	0	0	0	0	0	641.1097		641.1097	9	71.2344	-4.8978
4	0	5	0	0	0	0	0	628.8837		628.8837	9	69.8760	-6.2562
12									4024.2575				
0	1	1	0	0	0	0	0	704.2528		704.2528	12	58.6877	-17.4445
0	1	2	0	0	0	0	0	756.1667		756.1667	12	63.0139	-13.1183
0	1	3	0	0	0	0	0	730.5357		730.5357	12	60.8780	-15.2542
0	1	4	0	0	0	0	0	735.8990		735.8990	12	61.3249	-14.8073
0	1	5	0	0	0	0	0	718.2660		718.2660	12	59.8555	-16.2767
0	2	1	0	0	0	0	0	910.6310		910.6310	12	75.8859	-0.2463
0	2	2	0	0	0	0	0	949.0820		949.0820	12	79.0902	2.9580
0	2	3	0	0	0	0	0	913.0141		913.0141	12	76.0845	-0.0477
0	2	4	0	0	0	0	0	887.7411		887.7411	12	73.9784	-2.1538
0	2	5	0	0	0	0	0	882.3888		882.3888	12	73.5324	-2.5998
0	3	1	0	0	0	0	0	1096.7590		1096.7590	12	91.3966	15.2644
0	3	2	0	0	0	0	0	1125.4840		1125.4840	12	93.7903	17.6581
0	3	3	0	0	0	0	0	1107.0663		1107.0663	12	92.2555	16.1233
0	3	4	0	0	0	0	0	1101.2875		1101.2875	12	91.7740	15.6618
0	3	5	0	0	0	0	0	1085.2191		1085.2191	12	90.4349	14.3027
8									29609.9141				
1	1	1	0	0	0	0	0	196.9154		196.9154	3	65.6385	-10.4937
1	1	2	0	0	0	0	0	210.0803		210.0803	3	70.0268	-6.1054
1	1	3	0	0	0	0	0	201.0143		201.0143	3	67.0048	-9.1274
1	1	4	0	0	0	0	0	202.5509		202.5509	3	67.5170	-8.6152
1	1	5	0	0	0	0	0	201.7821		201.7821	3	67.2607	-8.8715
1	2	1	0	0	0	0	0	243.2206		243.2206	3	81.0735	4.9413
1	2	2	0	0	0	0	0	256.4767		256.4767	3	85.4922	9.3600
1	2	3	0	0	0	0	0	253.4385		253.4385	3	84.4795	8.2473
1	2	4	0	0	0	0	0	249.5468		249.5468	3	83.1823	7.0501
1	2	5	0	0	0	0	0	249.6599		249.6599	3	83.2200	7.0878
1	3	1	0	0	0	0	0	295.0482		295.0482	3	98.3494	22.2173
1	3	2	0	0	0	0	0	298.9724		298.9724	3	99.6575	23.5253
1	3	3	0	0	0	0	0	298.3845		298.3845	3	99.4415	23.3293
1	3	4	0	0	0	0	0	292.7978		292.7978	3	97.5993	21.4671
1	3	5	0	0	0	0	0	293.9899		293.9899	3	97.9966	21.8644
2	1	1	0	0	0	0	0	174.4297		174.4297	3	58.1432	-17.9890
2	1	2	0	0	0	0	0	191.8403		191.8403	3	63.9468	-12.1854
2	1	3	0	0	0	0	0	187.2812		187.2812	3	62.4271	-13.7051
2	1	4	0	0	0	0	0	185.1564		185.1564	3	61.7188	-14.4134
2	1	5	0	0	0	0	0	179.3909		179.3909	3	59.7879	-16.3332
2	2	1	0	0	0	0	0	228.5602		228.5602	3	76.1867	0.0545
2	2	2	0	0	0	0	0	240.1553		240.1553	3	80.0518	3.9196
2	2	3	0	0	0	0	0	227.2546		227.2546	3	75.7515	-0.3807
2	2	4	0	0	0	0	0	213.7923		213.7923	3	71.2641	-4.8461
2	2	5	0	0	0	0	0	219.9923		219.9923	3	73.3308	-2.8014
2	3	1	0	0	0	0	0	278.9025		278.9025	3	92.9478	16.8353
2	3	2	0	0	0	0	0	287.7041		287.7041	3	95.9014	19.7692
2	3	3	0	0	0	0	0	281.3160		281.3160	3	93.7720	17.6398
2	3	4	0	0	0	0	0	279.7049		279.7049	3	93.2350	17.1028
2	3	5	0	0	0	0	0	276.3523		276.3523	3	92.1174	15.9852
3	1	1	0	0	0	0	0	167.9710		167.9710	3	55.9903	-20.1419
3	1	2	0	0	0	0	0	181.2278		181.2278	3	60.4093	-13.7229
3	1	3	0	0	0	0	0	172.9180		172.9180	3	57.6393	-18.4929
3	1	4	0	0	0	0	0	178.9947		178.9947	3	59.6449	-16.4673
3	1	5	0	0	0	0	0	172.2923		172.2923	3	57.4308	-18.7014
3	2	1	0	0	0	0	0	223.8542		223.8542	3	74.6187	-1.9133
3	2	2	0	0	0	0	0	227.3468		227.3468	3	75.7823	-0.3499
3	2	3	0	0	0	0	0	219.8868		219.8868	3	74.8868	-2.8867

TABLE 8.2-6 TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE MUM/80	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	2	4	0	0	0	0	0	214.2959		214.2959	3	71.4320	-4.7082
3	2	5	0	0	0	0	0	205.7779		205.7779	3	68.5926	-7.5396
3	3	1	0	0	0	0	0	264.1701		264.1701	3	88.0567	11.9245
3	3	2	0	0	0	0	0	271.9549		271.9549	3	90.6516	14.3194
3	3	3	0	0	0	0	0	264.3314		264.3314	3	88.1105	11.9783
3	3	4	0	0	0	0	0	266.9782		266.9782	3	88.9927	12.8605
3	3	5	0	0	0	0	0	257.7526		257.7526	3	85.9175	9.7853
4	1	1	0	0	0	0	0	164.9367		164.9367	3	54.9789	-21.1533
4	1	2	0	0	0	0	0	173.0183		173.0183	3	57.6728	-18.4594
4	1	3	0	0	0	0	0	169.3222		169.3222	3	56.4407	-19.6915
4	1	4	0	0	0	0	0	169.1970		169.1970	3	56.3990	-19.7332
4	1	5	0	0	0	0	0	164.8007		164.8007	3	54.9236	-21.1986
4	2	1	0	0	0	0	0	214.9940		214.9940	3	71.6647	-4.4675
4	2	2	0	0	0	0	0	225.1032		225.1032	3	75.0344	-1.0978
4	2	3	0	0	0	0	0	212.4344		212.4344	3	70.8115	-5.3207
4	2	4	0	0	0	0	0	210.1061		210.1061	3	70.0284	-6.0968
4	2	5	0	0	0	0	0	206.9587		206.9587	3	68.9042	-7.1460
4	3	1	0	0	0	0	0	258.6382		258.6382	3	86.2127	10.0805
4	3	2	0	0	0	0	0	266.8526		266.8526	3	88.9509	12.8187
4	3	3	0	0	0	0	0	263.0344		263.0344	3	87.6781	11.5459
4	3	4	0	0	0	0	0	261.8066		261.8066	3	87.2689	11.1367
4	3	5	0	0	0	0	0	257.1243		257.1243	3	85.7081	9.5759
24								33422.1826					

TABLE 8.2-6 TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SUMMARY OF ANALYSIS										TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE				
SOURCE										DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	F	T
A	B	C	D	E	F	G	H							
A	1	0	0	0	0	0	0	0		3	3631.2140	1210.4053	398.07 *	2.68
B	0	1	0	0	0	0	0	0		2	29178.2377	14589.1188	44737.156 *	3.02
C	0	0	1	0	0	0	0	0		4	341.7553	85.4388	27.75 *	2.46
AB	1	1	0	0	0	0	0	0		4	536.2143	134.0536	2288.6 *	2.17
AC	1	0	1	0	0	0	0	0		2	91.2063	45.6031	11.38 *	1.83
BC	0	1	1	0	0	0	0	0		8	89.9212	11.2401	3.65 *	22.02
ABC	1	1	1	0	0	0	0	0		20	74.9801	3.7490	1.04	112.84
RESIDUAL										130	262.5284	2.0195		
A = TIME														
B = TEMP														
C = BATCH														
E = BATCH														

TABLE 8.2-7 TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER

ANALYSIS OF VARIANCE								TELEPS P-LEG PERFORMANCE ANALYSIS FOR POWER			
A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	0	0	0	0	0	0.28970	0.28970	0.02801	3
1	1	2	0	0	0	0	0	0.28728	0.28728	0.02761	3
1	1	3	0	0	0	0	0	0.27055	0.27055	0.02463	3
1	1	4	0	0	0	0	0	0.27873	0.27873	0.02592	3
1	1	5	0	0	0	0	0	0.27652	0.27652	0.02553	3
1	2	1	0	0	0	0	0	0.42916	0.42916	0.06184	3
1	2	2	0	0	0	0	0	0.39269	0.39269	0.05140	3
1	2	3	0	0	0	0	0	0.40293	0.40293	0.05413	3
1	2	4	0	0	0	0	0	0.40103	0.40103	0.05363	3
1	2	5	0	0	0	0	0	0.38574	0.38574	0.04978	3
1	3	1	0	0	0	0	0	0.52712	0.52712	0.09265	3
1	3	2	0	0	0	0	0	0.50307	0.50307	0.08440	3
1	3	3	0	0	0	0	0	0.51084	0.51084	0.08700	3
1	3	4	0	0	0	0	0	0.50927	0.50927	0.08651	3
1	3	5	0	0	0	0	0	0.50684	0.50684	0.08564	3
2	1	1	0	0	0	0	0	0.31627	0.31627	0.03240	3
2	1	2	0	0	0	0	0	0.28530	0.28530	0.02715	3
2	1	3	0	0	0	0	0	0.29831	0.29831	0.02975	3
2	1	4	0	0	0	0	0	0.29212	0.29212	0.02845	3
2	1	5	0	0	0	0	0	0.32002	0.32002	0.03440	3
2	2	1	0	0	0	0	0	0.43444	0.43444	0.04315	3
2	2	2	0	0	0	0	0	0.42504	0.42504	0.04022	3
2	2	3	0	0	0	0	0	0.42712	0.42712	0.04082	3
2	2	4	0	0	0	0	0	0.48385	0.48385	0.07820	3
2	2	5	0	0	0	0	0	0.45051	0.45051	0.06825	3
2	3	1	0	0	0	0	0	0.50515	0.50515	0.10180	3
2	3	2	0	0	0	0	0	0.52995	0.52995	0.09978	3
2	3	3	0	0	0	0	0	0.57827	0.57827	0.12172	3
2	3	4	0	0	0	0	0	0.54834	0.54834	0.10033	3
2	3	5	0	0	0	0	0	0.56835	0.56835	0.10781	3
3	1	1	0	0	0	0	0	0.27676	0.27676	0.02581	3
3	1	2	0	0	0	0	0	0.29101	0.29101	0.02825	3
3	1	3	0	0	0	0	0	0.30793	0.30793	0.03181	3
3	1	4	0	0	0	0	0	0.28728	0.28728	0.02761	3
3	1	5	0	0	0	0	0	0.29935	0.29935	0.02987	3
3	2	1	0	0	0	0	0	0.42769	0.42769	0.06115	3
3	2	2	0	0	0	0	0	0.44711	0.44711	0.06664	3
3	2	3	0	0	0	0	0	0.42259	0.42259	0.05956	3
3	2	4	0	0	0	0	0	0.42172	0.42172	0.05971	3
3	2	5	0	0	0	0	0	0.48063	0.48063	0.07820	3
3	3	1	0	0	0	0	0	0.54930	0.54930	0.10135	3
3	3	2	0	0	0	0	0	0.56995	0.56995	0.10841	3
3	3	3	0	0	0	0	0	0.56973	0.56973	0.10893	3
3	3	4	0	0	0	0	0	0.59042	0.59042	0.11552	3
3	3	5	0	0	0	0	0	0.60987	0.60987	0.12380	3
4	1	1	0	0	0	0	0	0.28530	0.28530	0.02715	3
4	1	2	0	0	0	0	0	0.27532	0.27532	0.02574	3
4	1	3	0	0	0	0	0	0.30128	0.30128	0.03027	3
4	1	4	0	0	0	0	0	0.26813	0.26813	0.02493	3
4	1	5	0	0	0	0	0	0.31092	0.31092	0.03283	3
4	2	1	0	0	0	0	0	0.38465	0.38465	0.04980	3
4	2	2	0	0	0	0	0	0.42785	0.42785	0.05687	3
4	2	3	0	0	0	0	0	0.39173	0.39173	0.05171	3
4	2	4	0	0	0	0	0	0.40396	0.40396	0.05489	3
4	2	5	0	0	0	0	0	0.41803	0.41803	0.05857	3
4	3	1	0	0	0	0	0	0.56741	0.56741	0.10781	3
4	3	2	0	0	0	0	0	0.58933	0.58933	0.11774	3
4	3	3	0	0	0	0	0	0.58783	0.58783	0.11715	3

TABLE 8.2-7 TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

A	B	C	D	E	F	G	H	AA	XB	X122	B
4	3	4	0	0	0	0	0	0.5967	0.5876	0.1147	1
4	3	5	0	0	0	0	0	0.6381	0.6381	0.1358	1

ANALYSIS OF VARIANCE TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER											
SOURCE		DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F			
BETWEEN		59		0.2518		0.0043		40.992			
WITHIN		128		0.0025		0.0001					
TOTAL		187		0.2543							

SOURCE								SUM X1	CRUDE	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	0	0	0	0	0	0	0	5.8715		5.8715	45	0.1327	-0.0085
2	0	0	0	0	0	0	0	6.5098		6.5098	45	0.1447	0.0035
3	0	0	0	0	0	0	0	6.5210		6.5210	45	0.1449	0.0037
4	0	0	0	0	0	0	0	6.4068		6.4068	45	0.1424	0.0012
0	1	0	0	0	0	0	0	5.8183		5.8183	60	0.0970	-0.0442
0	2	0	0	0	0	0	0	8.4286		8.4286	60	0.1405	-0.0007
0	3	0	0	0	0	0	0	11.1622		11.1622	60	0.1860	0.0449
0	0	1	0	0	0	0	0	5.0396		5.0396	36	0.1400	-0.0012
0	0	2	0	0	0	0	0	5.0239		5.0239	36	0.1396	-0.0016
0	0	3	0	0	0	0	0	5.0395		5.0395	36	0.1400	-0.0012
0	0	4	0	0	0	0	0	5.0395		5.0395	36	0.1400	-0.0012
0	0	5	0	0	0	0	0	5.0395		5.0395	36	0.1400	-0.0012
1	1	0	0	0	0	0	0	1.4028		1.4028	15	0.0935	-0.0476
1	2	0	0	0	0	0	0	1.4028		1.4028	15	0.0935	-0.0476
1	3	0	0	0	0	0	0	1.4028		1.4028	15	0.0935	-0.0476
2	1	0	0	0	0	0	0	1.4028		1.4028	15	0.0935	-0.0476
2	2	0	0	0	0	0	0	2.2210		2.2210	15	0.1481	0.0069
2	3	0	0	0	0	0	0	2.7768		2.7768	15	0.1851	0.0440
3	1	0	0	0	0	0	0	1.4623		1.4623	15	0.0975	-0.0437
3	2	0	0	0	0	0	0	1.4623		1.4623	15	0.0975	-0.0437
3	3	0	0	0	0	0	0	1.4623		1.4623	15	0.0975	-0.0437
4	1	0	0	0	0	0	0	1.4623		1.4623	15	0.0975	-0.0437
4	2	0	0	0	0	0	0	2.0262		2.0262	15	0.1351	-0.0061
4	3	0	0	0	0	0	0	2.9395		2.9395	15	0.1960	0.0548
1	0	1	0	0	0	0	0	1.1830		1.1830	9	0.1314	-0.0097
1	0	2	0	0	0	0	0	1.1843		1.1843	9	0.1316	-0.0096
1	0	3	0	0	0	0	0	1.1890		1.1890	9	0.1321	-0.0090
2	0	1	0	0	0	0	0	1.1830		1.1830	9	0.1314	-0.0097
2	0	2	0	0	0	0	0	1.1843		1.1843	9	0.1316	-0.0096
2	0	3	0	0	0	0	0	1.3040		1.3040	9	0.1444	0.0037
2	0	4	0	0	0	0	0	1.3243		1.3243	9	0.1471	0.0060
2	0	5	0	0	0	0	0	1.3389		1.3389	9	0.1488	0.0076
3	0	1	0	0	0	0	0	1.1830		1.1830	9	0.1314	-0.0097
3	0	2	0	0	0	0	0	1.1843		1.1843	9	0.1316	-0.0096
3	0	3	0	0	0	0	0	1.1890		1.1890	9	0.1321	-0.0090

TABLE 8.2-7 TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE							SUM X1	CRUDE SUM/Hz	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H					
3	0	4	0	0	0	0	0	1.2994	1.2994	9	0.1444	0.0032
3	0	5	0	0	0	0	0	1.3593	1.3593	9	0.1810	0.0099
4	0	1	0	0	0	0	0	1.2375	1.2375	9	0.1375	-0.0037
4	0	2	0	0	0	0	0	0.2500	0.2500	9	0.0400	0.0024
4	0	3	0	0	0	0	0	1.2500	1.2500	9	0.1500	0.0022
4	0	4	0	0	0	0	0	1.2500	1.2500	9	0.1500	-0.0013
4	0	5	0	0	0	0	0	1.3671	1.3671	9	0.1519	0.0107
							12	0.0073				
0	1	1	0	0	0	0	0	1.1697	1.1697	12	0.0974	-0.0438
0	1	2	0	0	0	0	0	1.3009	1.3009	12	0.0940	-0.0463
0	1	3	0	0	0	0	0	1.1781	1.1781	12	0.0982	-0.0430
0	1	4	0	0	0	0	0	1.1263	1.1263	12	0.0939	-0.0473
0	1	5	0	0	0	0	0	1.2068	1.2068	12	0.1006	-0.0406
0	2	1	0	0	0	0	0	1.1709	1.1709	12	0.1077	-0.0015
0	2	2	0	0	0	0	0	1.0427	1.0427	12	0.1021	-0.0001
0	2	3	0	0	0	0	0	1.1408	1.1408	12	0.1080	-0.0041
0	2	4	0	0	0	0	0	1.7106	1.7106	12	0.1425	0.0014
0	2	5	0	0	0	0	0	1.7049	1.7049	12	0.1421	0.0009
0	3	1	0	0	0	0	0	2.1954	2.1954	12	0.1829	0.0418
0	3	2	0	0	0	0	0	2.1989	2.1989	12	0.1827	0.0419
0	3	3	0	0	0	0	0	2.2198	2.2198	12	0.1867	0.0086
0	3	4	0	0	0	0	0	2.2818	2.2818	12	0.1902	0.0481
0	3	5	0	0	0	0	0	2.3227	2.3227	12	0.1936	0.0524
							8	0.2395				
1	1	1	0	0	0	0	0	0.2897	0.2897	3	0.0966	-0.0446
1	1	2	0	0	0	0	0	0.2873	0.2873	3	0.0958	-0.0443
1	1	3	0	0	0	0	0	0.2705	0.2705	3	0.0902	-0.0510
1	1	4	0	0	0	0	0	0.2787	0.2787	3	0.0929	-0.0483
1	1	5	0	0	0	0	0	0.2765	0.2765	3	0.0922	-0.0490
1	2	1	0	0	0	0	0	0.4082	0.4082	3	0.1361	0.0019
1	2	2	0	0	0	0	0	0.3947	0.3947	3	0.1299	-0.0103
1	2	3	0	0	0	0	0	0.4079	0.4079	3	0.1338	-0.0069
1	2	4	0	0	0	0	0	0.4010	0.4010	3	0.1337	-0.0075
1	2	5	0	0	0	0	0	0.3857	0.3857	3	0.1286	-0.0126
1	3	1	0	0	0	0	0	0.5271	0.5271	3	0.1757	0.0345
1	3	2	0	0	0	0	0	0.5058	0.5058	3	0.1677	0.0265
1	3	3	0	0	0	0	0	0.4108	0.4108	3	0.1333	0.0201
1	3	4	0	0	0	0	0	0.4098	0.4098	3	0.1328	0.0206
1	3	5	0	0	0	0	0	0.5068	0.5068	3	0.1689	0.0278
2	1	1	0	0	0	0	0	0.3164	0.3164	3	0.1055	-0.0357
2	1	2	0	0	0	0	0	0.2853	0.2853	3	0.0951	-0.0461
2	1	3	0	0	0	0	0	0.2894	0.2894	3	0.0966	-0.0427
2	1	4	0	0	0	0	0	0.3025	0.3025	3	0.1006	-0.0438
2	1	5	0	0	0	0	0	0.2890	0.2890	3	0.0963	-0.0425
2	2	1	0	0	0	0	0	0.4344	0.4344	3	0.1448	0.0037
2	2	2	0	0	0	0	0	0.4250	0.4250	3	0.1417	0.0005
2	2	3	0	0	0	0	0	0.4271	0.4271	3	0.1424	0.0012
2	2	4	0	0	0	0	0	0.4354	0.4354	3	0.1470	0.0021
2	2	5	0	0	0	0	0	0.4082	0.4082	3	0.1361	0.0008
2	3	1	0	0	0	0	0	0.5299	0.5299	3	0.1766	0.0427
2	3	2	0	0	0	0	0	0.5299	0.5299	3	0.1766	0.0355
2	3	3	0	0	0	0	0	0.5786	0.5786	3	0.1929	0.0517
2	3	4	0	0	0	0	0	0.5483	0.5483	3	0.1828	0.0416
2	3	5	0	0	0	0	0	0.5786	0.5786	3	0.1929	0.0448
3	1	1	0	0	0	0	0	0.3079	0.3079	3	0.1026	-0.0409
3	1	2	0	0	0	0	0	0.2873	0.2873	3	0.0958	-0.0402
3	1	3	0	0	0	0	0	0.3079	0.3079	3	0.1026	-0.0385
3	1	4	0	0	0	0	0	0.2873	0.2873	3	0.0958	-0.0454
3	1	5	0	0	0	0	0	0.2993	0.2993	3	0.0998	-0.0414
3	2	1	0	0	0	0	0	0.4344	0.4344	3	0.1448	0.0037
3	2	2	0	0	0	0	0	0.4250	0.4250	3	0.1417	0.0005
3	2	3	0	0	0	0	0	0.4271	0.4271	3	0.1424	0.0012
3	2	4	0	0	0	0	0	0.4354	0.4354	3	0.1470	0.0021
3	2	5	0	0	0	0	0	0.4082	0.4082	3	0.1361	0.0008
3	3	1	0	0	0	0	0	0.5299	0.5299	3	0.1766	0.0427
3	3	2	0	0	0	0	0	0.5299	0.5299	3	0.1766	0.0355
3	3	3	0	0	0	0	0	0.5786	0.5786	3	0.1929	0.0517
3	3	4	0	0	0	0	0	0.5483	0.5483	3	0.1828	0.0416
3	3	5	0	0	0	0	0	0.5786	0.5786	3	0.1929	0.0448

TABLE 8.2-7 TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
3	2	4	0	0	0	0	0	0.4217		0.4217	3	0.1406	-0.0006
3	2	5	0	0	0	0	0	0.4506		0.4506	3	0.1502	0.0090
3	3	1	0	0	0	0	0	0.5493		0.5493	3	0.1831	0.0419
3	3	2	0	0	0	0	0	0.5699		0.5699	3	0.1900	0.0488
3	3	3	0	0	0	0	0	0.5697		0.5697	3	0.1899	0.0487
3	3	4	0	0	0	0	0	0.5904		0.5904	3	0.1968	0.0556
3	3	5	0	0	0	0	0	0.6094		0.6094	3	0.2031	0.0620
4	1	1	0	0	0	0	0	0.2854		0.2854	3	0.0951	-0.0460
4	1	2	0	0	0	0	0	0.2753		0.2753	3	0.0918	-0.0494
4	1	3	0	0	0	0	0	0.3013		0.3013	3	0.1004	-0.0407
4	1	4	0	0	0	0	0	0.2681		0.2681	3	0.0894	-0.0518
4	1	5	0	0	0	0	0	0.3109		0.3109	3	0.1036	-0.0379
4	2	1	0	0	0	0	0	0.3846		0.3846	3	0.1282	-0.0129
4	2	2	0	0	0	0	0	0.4278		0.4278	3	0.1426	0.0015
4	2	3	0	0	0	0	0	0.3917		0.3917	3	0.1306	-0.0106
4	2	4	0	0	0	0	0	0.4040		0.4040	3	0.1347	-0.0065
4	2	5	0	0	0	0	0	0.4180		0.4180	3	0.1393	-0.0018
4	3	1	0	0	0	0	0	0.5674		0.5674	3	0.1891	0.0480
4	3	2	0	0	0	0	0	0.5893		0.5893	3	0.1964	0.0553
4	3	3	0	0	0	0	0	0.5578		0.5578	3	0.1859	0.0448
4	3	4	0	0	0	0	0	0.5868		0.5868	3	0.1956	0.0544
4	3	5	0	0	0	0	0	0.6382		0.6382	3	0.2127	0.0716
24									0.2516				

TABLE 8.2-7 TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

	SOURCE								DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	F	
	A	B	C	D	E	F	G	H					
A	1	0	0	0	0	0	0	0	3	0.0045	0.001500	14.42 *	2.68
B	0	1	0	0	0	0	0	0	2	0.2380	0.119000	1744.23 *	3.07
C	0	0	1	0	0	0	0	0	4	0.0008	0.000200	1.92	2.45
AB	1	1	0	0	0	0	0	0	6	0.0039	0.000650	6.25 *	2.17
AC	1	0	1	0	0	0	0	0	12	0.0020	0.000167	1.61	1.83
BC	0	1	1	0	0	0	0	0	8	0.0007	0.000088	< 1	2.02
ABC	1	1	1	0	0	0	0	0	24	0.0019	0.000079	< 1	1.61
RESIDUAL									120	0.0125	0.000104		

A = TIME

B = TEMP

C = BATCH

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	1	0	0	0	0	12.80890	12.80890	164.06792	1
1	1	1	2	0	0	0	0	12.61900	12.61900	159.23916	1
1	1	2	1	0	0	0	0	12.54180	12.54180	157.29675	1
1	1	2	2	0	0	0	0	12.55090	12.55090	157.52509	1
1	1	3	1	0	0	0	0	12.69000	12.69000	161.03610	1
1	1	3	2	0	0	0	0	12.40180	12.40180	153.80464	1
1	1	4	1	0	0	0	0	13.27500	13.27500	176.22562	1
1	1	4	2	0	0	0	0	12.94330	12.94330	167.52901	1
1	1	5	1	0	0	0	0	12.81870	12.81870	164.31907	1
1	1	5	2	0	0	0	0	12.47750	12.47750	155.68801	1
1	2	1	1	0	0	0	0	14.62200	14.62200	213.80288	1
1	2	1	2	0	0	0	0	14.40550	14.40550	207.51843	1
1	2	2	1	0	0	0	0	14.40450	14.40450	207.48962	1
1	2	2	2	0	0	0	0	13.83100	13.83100	191.29656	1
1	2	3	1	0	0	0	0	14.99600	14.99600	224.88002	1
1	2	3	2	0	0	0	0	15.02320	15.02320	225.69654	1
1	2	4	1	0	0	0	0	15.46650	15.46650	239.21262	1
1	2	4	2	0	0	0	0	13.59310	13.59310	184.77237	1
1	2	5	1	0	0	0	0	14.05150	14.05150	197.44465	1
1	2	5	2	0	0	0	0	13.92640	13.92640	193.94462	1
1	3	1	1	0	0	0	0	16.20000	16.20000	262.44000	1
1	3	1	2	0	0	0	0	15.76040	15.76040	248.39021	1
1	3	2	1	0	0	0	0	14.64330	14.64330	214.42623	1
1	3	2	2	0	0	0	0	14.05750	14.05750	197.61331	1
1	3	3	1	0	0	0	0	15.60120	15.60120	243.39744	1
1	3	3	2	0	0	0	0	15.89660	15.89660	252.70189	1
1	3	4	1	0	0	0	0	15.87250	15.87250	251.93626	1
1	3	4	2	0	0	0	0	16.40750	16.40750	269.20606	1
1	3	5	1	0	0	0	0	15.85330	15.85330	251.32712	1
1	3	5	2	0	0	0	0	15.55580	15.55580	241.98291	1
2	1	1	1	0	0	0	0	12.40450	12.40450	153.87162	1
2	1	1	2	0	0	0	0	12.47080	12.47080	155.52085	1
2	1	2	1	0	0	0	0	12.27300	12.27300	150.62653	1
2	1	2	2	0	0	0	0	11.97540	11.97540	143.41021	1
2	1	3	1	0	0	0	0	12.56090	12.56090	157.77621	1
2	1	3	2	0	0	0	0	12.59530	12.59530	158.64158	1
2	1	4	1	0	0	0	0	12.67580	12.67580	160.67591	1
2	1	4	2	0	0	0	0	12.34230	12.34230	152.33237	1
2	1	5	1	0	0	0	0	11.97890	11.97890	143.49405	1
2	1	5	2	0	0	0	0	11.91690	11.91690	142.01251	1
2	2	1	1	0	0	0	0	14.85220	14.85220	220.58784	1
2	2	1	2	0	0	0	0	14.50650	14.50650	210.43854	1
2	2	2	1	0	0	0	0	14.10720	14.10720	199.01309	1
2	2	2	2	0	0	0	0	13.88400	13.88400	192.76546	1
2	2	3	1	0	0	0	0	14.92700	14.92700	222.81533	1
2	2	3	2	0	0	0	0	15.16300	15.16300	229.91657	1
2	2	4	1	0	0	0	0	15.13910	15.13910	229.19235	1
2	2	4	2	0	0	0	0	14.18090	14.18090	201.09792	1
2	2	5	1	0	0	0	0	13.96330	13.96330	194.97375	1
2	2	5	2	0	0	0	0	13.92390	13.92390	193.87499	1
2	3	1	1	0	0	0	0	15.34290	15.34290	235.40458	1
2	3	1	2	0	0	0	0	15.12140	15.12140	228.65674	1
2	3	2	1	0	0	0	0	14.93030	14.93030	222.91386	1
2	3	2	2	0	0	0	0	15.13860	15.13860	229.17721	1
2	3	3	1	0	0	0	0	15.15380	15.15380	229.63765	1
2	3	3	2	0	0	0	0	16.35320	16.35320	267.42715	1
2	3	4	1	0	0	0	0	15.65110	15.65110	244.95693	1
2	3	4	2	0	0	0	0	16.34710	16.34710	267.22768	1

44 TIME

B = TEMP

CC BATCH

D = DIRECTION OF CURRENT

[illegible]

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

ANALYSIS OF VARIANCE								TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE							
SOURCE								DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE		F			
BETWEEN								119	349.6204	0.0		0.0			
WITHIN								0	0.0	0.0					
TOTAL								119	349.6204						

SOURCE								SUM X1	CRUDE	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H	SUM/SQ					
1	0	0	0	0	0	0	0	427.2947		427.2947	30	14.2432	0.1155
2	0	0	0	0	0	0	0	424.0398		424.0398	30	14.1347	0.6080
3	0	0	0	0	0	0	0	389.7089		389.7089	30	12.9903	-0.5364
4	0	0	0	0	0	0	0	382.1590		382.1590	30	12.7386	-0.7881
								93.7511					
0	1	0	0	0	0	0	0	484.6896		484.6896	40	12.1172	-1.4094
0	2	0	0	0	0	0	0	561.3649		561.3649	40	14.0341	0.5074
0	3	0	0	0	0	0	0	577.1479		577.1479	40	14.4287	0.9020
								122.3082					
0	0	1	0	0	0	0	0	328.6477		328.6477	24	13.6937	0.1670
0	0	2	0	0	0	0	0	320.6741		320.6741	24	13.3614	-0.1653
0	0	3	0	0	0	0	0	339.7717		339.7717	24	14.1572	0.6305
0	0	4	0	0	0	0	0	308.8867		308.8867	24	12.8699	-0.7397
0	0	5	0	0	0	0	0	327.2222		327.2222	24	13.6343	0.1076
								14.2752					
0	0	0	1	0	0	0	0	831.3539		831.3539	60	13.8559	0.3292
0	0	0	2	0	0	0	0	791.8589		791.8589	60	13.1979	-0.9292
								13.0054					
1	1	0	0	0	0	0	0	127.1269		127.1269	10	12.7127	-0.8140
1	2	0	0	0	0	0	0	144.3197		144.3197	10	14.4320	0.9053
1	3	0	0	0	0	0	0	133.8461		133.8461	10	13.3846	2.0901
2	1	0	0	0	0	0	0	123.1938		123.1938	10	12.3194	-1.2073
2	2	0	0	0	0	0	0	144.6471		144.6471	10	14.4647	0.9388
2	3	0	0	0	0	0	0	156.1989		156.1989	10	15.6199	2.0932
3	1	0	0	0	0	0	0	117.1316		117.1316	10	11.7132	-1.8135
3	2	0	0	0	0	0	0	139.1263		139.1263	10	13.9126	0.3859
3	3	0	0	0	0	0	0	133.4910		133.4910	10	13.3491	-0.1803
4	1	0	0	0	0	0	0	117.2373		117.2373	10	11.7237	-1.0082
4	2	0	0	0	0	0	0	133.3218		133.3218	10	13.3322	-0.1009
4	3	0	0	0	0	0	0	131.6499		131.6499	10	13.1650	-0.3617
								193.2906					
1	0	1	0	0	0	0	0	86.4158		86.4158	6	14.4026	0.8794
1	0	2	0	0	0	0	0	82.0290		82.0290	6	13.6715	0.2400
1	0	3	0	0	0	0	0	86.6088		86.6088	6	14.4348	0.9081
1	0	4	0	0	0	0	0	87.5579		87.5579	6	14.5930	1.0663
1	0	5	0	0	0	0	0	84.6832		84.6832	6	14.1139	0.5872
2	0	1	0	0	0	0	0	86.4993		86.4993	6	14.4165	0.8897
2	0	2	0	0	0	0	0	82.3065		82.3065	6	13.7175	0.1904
2	0	3	0	0	0	0	0	86.7532		86.7532	6	14.4589	0.8933

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	0	4	0	0	0	0	0	86.3363		86.3363	8	10.7920	-0.8427
2	0	5	0	0	0	0	0	83.9435		83.9435	8	10.4929	0.4639
3	0	1	0	0	0	0	0	79.9346		79.9346	6	13.3224	-0.2043
3	0	2	0	0	0	0	0	79.1230		79.1230	6	13.1872	-0.3395
3	0	3	0	0	0	0	0	84.0945		84.0945	6	14.0157	0.4891
3	0	4	0	0	0	0	0	66.5738		66.5738	6	11.0956	-2.4311
3	0	5	0	0	0	0	0	79.9830		79.9830	6	13.3305	-0.1962
4	0	1	0	0	0	0	0	77.5990		77.5990	6	12.9332	-0.5935
4	0	2	0	0	0	0	0	77.2136		77.2136	6	12.8689	-0.6578
4	0	3	0	0	0	0	0	82.3152		82.3152	6	13.7192	0.1925
4	0	4	0	0	0	0	0	66.4187		66.4187	6	11.0698	-2.4569
4	0	5	0	0	0	0	0	78.6125		78.6125	6	13.1021	-0.4246
12									112.1447				
1	0	0	1	0	0	0	0	215.8452		215.8452	15	14.3897	0.8630
1	0	0	2	0	0	0	0	211.4495		211.4495	15	14.0966	0.5699
2	0	0	1	0	0	0	0	212.2667		212.2667	15	14.1511	0.6244
2	0	0	2	0	0	0	0	211.7731		211.7731	15	14.1182	0.5915
3	0	0	1	0	0	0	0	204.0197		204.0197	15	13.6013	0.0746
3	0	0	2	0	0	0	0	185.6892		185.6892	15	12.3793	-1.1474
4	0	0	1	0	0	0	0	199.2223		199.2223	15	13.2815	-0.2452
4	0	0	2	0	0	0	0	182.9367		182.9367	15	12.1958	-1.3309
3									74.4442				
0	1	1	0	0	0	0	0	97.3056		97.3056	8	12.1632	-1.3635
0	1	2	0	0	0	0	0	96.5109		96.5109	8	12.0639	-1.4628
0	1	3	0	0	0	0	0	99.2027		99.2027	8	12.4003	-1.1263
0	1	4	0	0	0	0	0	94.2216		94.2216	8	11.7777	-1.7490
0	1	5	0	0	0	0	0	97.4488		97.4488	8	12.1811	-1.3456
0	2	1	0	0	0	0	0	113.7395		113.7395	8	14.2174	0.6908
0	2	2	0	0	0	0	0	110.1260		110.1260	8	13.7657	0.2391
0	2	3	0	0	0	0	0	119.4091		119.4091	8	14.9281	1.3995
0	2	4	0	0	0	0	0	107.0279		107.0279	8	13.3785	-0.1482
0	2	5	0	0	0	0	0	111.0624		111.0624	8	13.8828	0.3561
0	3	1	0	0	0	0	0	117.6026		117.6026	8	14.7003	1.1736
0	3	2	0	0	0	0	0	114.0372		114.0372	8	14.2546	0.7280
0	3	3	0	0	0	0	0	121.1599		121.1599	8	15.1450	1.6183
0	3	4	0	0	0	0	0	105.6372		105.6372	8	13.2046	-0.3220
0	3	5	0	0	0	0	0	118.7110		118.7110	8	14.8389	1.3122
8									153.0440				
0	1	0	1	0	0	0	0	250.2953		250.2953	20	12.5148	-1.0119
0	1	0	2	0	0	0	0	234.3943		234.3943	20	11.7197	-1.8070
0	2	0	1	0	0	0	0	287.4466		287.4466	20	14.3723	0.8456
0	2	0	2	0	0	0	0	273.9183		273.9183	20	13.6959	0.1692
0	3	0	1	0	0	0	0	293.6120		293.6120	20	14.6806	1.1539
0	3	0	2	0	0	0	0	283.5359		283.5359	20	14.1768	0.6501
2									135.7408				
0	0	1	1	0	0	0	0	169.3033		169.3033	12	14.1086	0.5819
0	0	1	2	0	0	0	0	159.3444		159.3444	12	13.2787	-0.2480
0	0	2	1	0	0	0	0	161.4416		161.4416	12	13.4535	-0.0732
0	0	2	2	0	0	0	0	159.2325		159.2325	12	13.2694	-0.2573
0	0	3	1	0	0	0	0	167.1923		167.1923	12	13.9327	0.4080
0	0	3	2	0	0	0	0	172.5794		172.5794	12	14.3816	0.8549
0	0	4	1	0	0	0	0	167.9446		167.9446	12	13.9954	0.4687
0	0	4	2	0	0	0	0	138.9421		138.9421	12	11.5785	-1.9482
0	0	5	1	0	0	0	0	165.4721		165.4721	12	13.7893	0.2627
0	0	5	2	0	0	0	0	161.7501		161.7501	12	13.4792	-0.0475
4									89.4492				

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	1	1	0	0	0	0	0	25.4279		25.4279	2	12.7139	-0.8127
1	1	2	0	0	0	0	0	25.0927		25.0927	2	12.5463	-0.9803
1	1	3	0	0	0	0	0	25.0918		25.0918	2	12.5459	-0.9808
1	1	4	0	0	0	0	0	26.2183		26.2183	2	13.1091	-0.4175
1	1	5	0	0	0	0	0	25.2962		25.2962	2	12.6481	-0.8786
1	2	1	0	0	0	0	0	29.0273		29.0273	2	14.5137	0.9871
1	2	2	0	0	0	0	0	28.2355		28.2355	2	14.1177	0.5911
1	2	3	0	0	0	0	0	30.0192		30.0192	2	15.0096	1.4829
1	2	4	0	0	0	0	0	29.0596		29.0596	2	14.5298	1.0031
1	2	5	0	0	0	0	0	27.9779		27.9779	2	13.9889	0.4623
1	3	1	0	0	0	0	0	31.9604		31.9604	2	15.9802	2.4535
1	3	2	0	0	0	0	0	28.7008		28.7008	2	14.3504	0.8237
1	3	3	0	0	0	0	0	31.4978		31.4978	2	15.7489	2.2222
1	3	4	0	0	0	0	0	32.2800		32.2800	2	16.1400	2.6133
1	3	5	0	0	0	0	0	31.4091		31.4091	2	15.7045	2.1779
2	1	1	0	0	0	0	0	24.8753		24.8753	2	12.4376	-1.0890
2	1	2	0	0	0	0	0	24.2484		24.2484	2	12.1242	-1.4029
2	1	3	0	0	0	0	0	25.1562		25.1562	2	12.5781	-0.9486
2	1	4	0	0	0	0	0	25.0181		25.0181	2	12.5090	-1.0176
2	1	5	0	0	0	0	0	23.8958		23.8958	2	11.9479	-1.5788
2	2	1	0	0	0	0	0	29.3587		29.3587	2	14.6793	1.1527
2	2	2	0	0	0	0	0	27.9912		27.9912	2	13.9956	0.4889
2	2	3	0	0	0	0	0	30.0900		30.0900	2	15.0450	1.5183
2	2	4	0	0	0	0	0	29.3200		29.3200	2	14.6600	1.1393
2	2	5	0	0	0	0	0	27.8872		27.8872	2	13.9436	0.4169
2	3	1	0	0	0	0	0	30.4643		30.4643	2	15.2321	1.7055
2	3	2	0	0	0	0	0	30.0689		30.0689	2	15.0344	1.5078
2	3	3	0	0	0	0	0	31.5070		31.5070	2	15.7535	2.2288
2	3	4	0	0	0	0	0	31.9982		31.9982	2	15.9991	2.4724
2	3	5	0	0	0	0	0	32.1605		32.1605	2	16.0802	2.5596
3	1	1	0	0	0	0	0	23.1982		23.1982	2	11.5991	-1.9276
3	1	2	0	0	0	0	0	23.8535		23.8535	2	11.9267	-1.5999
3	1	3	0	0	0	0	0	24.9196		24.9196	2	12.4598	-1.0669
3	1	4	0	0	0	0	0	20.7932		20.7932	2	10.3966	-3.1301
3	1	5	0	0	0	0	0	24.3671		24.3671	2	12.1835	-1.3431
3	2	1	0	0	0	0	0	28.7642		28.7642	2	14.3821	0.8554
3	2	2	0	0	0	0	0	27.3322		27.3322	2	13.6661	0.1394
3	2	3	0	0	0	0	0	29.7090		29.7090	2	14.8545	1.3278
3	2	4	0	0	0	0	0	25.6628		25.6628	2	12.8314	-0.6953
3	2	5	0	0	0	0	0	27.8581		27.8581	2	13.9290	0.3024
3	3	1	0	0	0	0	0	27.9722		27.9722	2	13.9861	0.4594
3	3	2	0	0	0	0	0	27.9373		27.9373	2	13.9686	0.4420
3	3	3	0	0	0	0	0	29.4659		29.4659	2	14.7329	1.2063
3	3	4	0	0	0	0	0	20.1178		20.1178	2	10.0589	-3.4678
3	3	5	0	0	0	0	0	27.9578		27.9578	2	13.9789	0.4522
4	1	1	0	0	0	0	0	23.8042		23.8042	2	11.9021	-1.6246
4	1	2	0	0	0	0	0	23.3163		23.3163	2	11.6581	-1.8685
4	1	3	0	0	0	0	0	24.0351		24.0351	2	12.0175	-1.5091
4	1	4	0	0	0	0	0	22.1920		22.1920	2	11.0960	-2.4307
4	1	5	0	0	0	0	0	23.8897		23.8897	2	11.9448	-1.5816
4	2	1	0	0	0	0	0	26.5891		26.5891	2	13.2945	-0.2321
4	2	2	0	0	0	0	0	26.3671		26.3671	2	13.1835	-0.2431
4	2	3	0	0	0	0	0	29.5909		29.5909	2	14.7954	1.2688
4	2	4	0	0	0	0	0	22.9855		22.9855	2	11.4927	-2.0339
4	2	5	0	0	0	0	0	27.5392		27.5392	2	13.7696	0.2429
4	3	1	0	0	0	0	0	27.2057		27.2057	2	13.6028	0.0762
4	3	2	0	0	0	0	0	27.3302		27.3302	2	13.6651	0.1364
4	3	3	0	0	0	0	0	28.8892		28.8892	2	14.4446	0.8179
4	3	4	0	0	0	0	0	21.2412		21.2412	2	10.6206	-2.9061
4	3	5	0	0	0	0	0	27.1836		27.1836	2	13.5918	0.0651
24								270.4500					
1	1	0	1	0	0	0	0	64.1344		64.1344	3	21.3781	-0.0388
1	1	0	2	0	0	0	0	62.9925		62.9925	3	20.9975	-0.0282
1	2	0	1	0	0	0	0	73.5409		73.5409	3	24.5136	1.1854

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	PERCENT X1
A	B	C	D	E	F	G	H						
1	2	0	2	0	0	0	0	70.7792		70.7792	5	14.1558	0.6292
1	3	0	1	0	0	0	0	78.1703		78.1703	5	15.6341	2.4074
1	3	0	2	0	0	0	0	77.6778		77.6778	5	15.5356	2.0089
2	1	0	1	0	0	0	0	61.8931		61.8931	5	12.3788	-1.1481
2	1	0	2	0	0	0	0	61.3007		61.3007	5	12.2601	-1.2665
2	2	0	1	0	0	0	0	72.9888		72.9888	5	14.5978	1.0711
2	2	0	2	0	0	0	0	71.6583		71.6583	5	14.3317	0.8050
2	3	0	1	0	0	0	0	77.3848		77.3848	5	15.4770	1.9503
2	3	0	2	0	0	0	0	78.8141		78.8141	5	15.7628	2.2361
3	1	0	1	0	0	0	0	62.5923		62.5923	5	12.5185	-1.0082
3	1	0	2	0	0	0	0	54.5393		54.5393	5	10.9079	-2.6188
3	2	0	1	0	0	0	0	71.5739		71.5739	5	14.3148	0.7881
3	2	0	2	0	0	0	0	67.5524		67.5524	5	13.5105	-0.0162
3	3	0	1	0	0	0	0	69.8535		69.8535	5	13.9707	0.4440
3	3	0	2	0	0	0	0	63.5975		63.5975	5	12.7195	-0.8072
4	1	0	1	0	0	0	0	61.6755		61.6755	5	12.3351	-1.1918
4	1	0	2	0	0	0	0	55.5618		55.5618	5	11.1124	-2.4143
4	2	0	1	0	0	0	0	69.3434		69.3434	5	13.8687	0.3420
4	2	0	2	0	0	0	0	63.9284		63.9284	5	12.7857	-0.7410
4	3	0	1	0	0	0	0	68.2034		68.2034	5	13.6407	0.1140
4	3	0	2	0	0	0	0	63.4465		63.4465	5	12.6893	-0.8374
								6	215.3730				
1	0	1	1	0	0	0	0	43.6309		43.6309	3	14.5436	1.0169
1	0	1	2	0	0	0	0	42.7849		42.7849	3	14.2616	0.7349
1	0	2	1	0	0	0	0	41.5896		41.5896	3	13.8632	0.3365
1	0	2	2	0	0	0	0	40.4394		40.4394	3	13.4798	-0.0469
1	0	3	1	0	0	0	0	43.2872		43.2872	3	14.4291	0.9024
1	0	3	2	0	0	0	0	43.3216		43.3216	3	14.4405	0.9138
1	0	4	1	0	0	0	0	44.6140		44.6140	3	14.8713	1.3448
1	0	4	2	0	0	0	0	42.9439		42.9439	3	14.3146	0.7879
1	0	5	1	0	0	0	0	42.7235		42.7235	3	14.2412	0.7145
1	0	5	2	0	0	0	0	41.9597		41.9597	3	13.9866	0.4599
2	0	1	1	0	0	0	0	42.5996		42.5996	3	14.1999	0.6732
2	0	1	2	0	0	0	0	42.0987		42.0987	3	14.0329	0.5062
2	0	2	1	0	0	0	0	41.3105		41.3105	3	13.7702	0.2435
2	0	2	2	0	0	0	0	40.9980		40.9980	3	13.6660	0.1393
2	0	3	1	0	0	0	0	42.6417		42.6417	3	14.2139	0.6872
2	0	3	2	0	0	0	0	44.1115		44.1115	3	14.7038	1.1771
2	0	4	1	0	0	0	0	43.4660		43.4660	3	14.4887	0.9620
2	0	4	2	0	0	0	0	42.8703		42.8703	3	14.2901	0.7634
2	0	5	1	0	0	0	0	42.2489		42.2489	3	14.0830	0.5563
2	0	5	2	0	0	0	0	41.6946		41.6946	3	13.8982	0.3715
3	0	1	1	0	0	0	0	41.7594		41.7594	3	13.9198	0.3931
3	0	1	2	0	0	0	0	38.1752		38.1752	3	12.7291	-0.8018
3	0	2	1	0	0	0	0	39.7584		39.7584	3	13.2528	-0.2739
3	0	2	2	0	0	0	0	39.3646		39.3646	3	13.1215	-0.4052
3	0	3	1	0	0	0	0	41.2505		41.2505	3	13.7502	0.2235
3	0	3	2	0	0	0	0	42.8440		42.8440	3	14.2813	0.7546
3	0	4	1	0	0	0	0	40.7048		40.7048	3	13.5683	0.0416
3	0	4	2	0	0	0	0	25.8890		25.8890	3	8.6230	-4.9037
3	0	5	1	0	0	0	0	40.5466		40.5466	3	13.5155	-0.0112
3	0	5	2	0	0	0	0	39.4364		39.4364	3	13.1455	-0.3812
4	0	1	1	0	0	0	0	41.3134		41.3134	3	13.7711	0.2444
4	0	1	2	0	0	0	0	36.2856		36.2856	3	12.0952	-1.4315
4	0	2	1	0	0	0	0	38.7831		38.7831	3	12.9277	-0.5990
4	0	2	2	0	0	0	0	38.4305		38.4305	3	12.8102	-0.7165
4	0	3	1	0	0	0	0	40.0129		40.0129	3	13.3376	-0.1891
4	0	3	2	0	0	0	0	42.3023		42.3023	3	14.1008	0.5741
4	0	4	1	0	0	0	0	39.1598		39.1598	3	13.0533	-0.4734
4	0	4	2	0	0	0	0	27.2589		27.2589	3	9.0863	-4.4404
4	0	5	1	0	0	0	0	39.9531		39.9531	3	13.3177	-0.2090
4	0	5	2	0	0	0	0	38.6594		38.6594	3	12.8883	-0.6402
								12	182.0459				

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H					
0	1	1	1	0	0	0	0	51.3949	51.3949	4	12.8462	-0.6780
0	1	1	2	0	0	0	0	45.9107	45.9107	4	11.4777	-2.0490
0	1	2	1	0	0	0	0	49.1967	49.1967	4	12.2992	-1.2275
0	1	2	2	0	0	0	0	47.3142	47.3142	4	11.8285	-1.6981
0	1	3	1	0	0	0	0	49.1122	49.1122	4	12.2780	-1.2486
0	1	3	2	0	0	0	0	50.0905	50.0905	4	12.5226	-1.0061
0	1	4	1	0	0	0	0	51.7769	51.7769	4	12.9442	-0.5825
0	1	4	2	0	0	0	0	42.4447	42.4447	4	10.6112	-2.9155
0	1	5	1	0	0	0	0	48.8146	48.8146	4	12.2036	-1.3230
0	1	5	2	0	0	0	0	48.6342	48.6342	4	12.1585	-1.3681
0	2	1	1	0	0	0	0	57.9381	57.9381	4	14.4845	0.9578
0	2	1	2	0	0	0	0	55.8014	55.8014	4	13.9503	0.4237
0	2	2	1	0	0	0	0	55.5998	55.5998	4	13.8999	0.3733
0	2	2	2	0	0	0	0	54.5262	54.5262	4	13.6315	0.1049
0	2	3	1	0	0	0	0	59.0175	59.0175	4	14.1944	1.2277
0	2	3	2	0	0	0	0	60.3916	60.3916	4	15.0979	1.5712
0	2	4	1	0	0	0	0	59.1291	59.1291	4	14.7623	1.2556
0	2	4	2	0	0	0	0	47.8988	47.8988	4	11.9767	-1.5520
0	2	5	1	0	0	0	0	55.7621	55.7621	4	13.9405	0.4138
0	2	5	2	0	0	0	0	55.3003	55.3003	4	13.8251	0.2984
0	3	1	1	0	0	0	0	59.9703	59.9703	4	14.9926	1.4859
0	3	1	2	0	0	0	0	57.6323	57.6323	4	14.4081	0.8814
0	3	2	1	0	0	0	0	56.6451	56.6451	4	14.1613	0.6346
0	3	2	2	0	0	0	0	57.3921	57.3921	4	14.3480	0.8213
0	3	3	1	0	0	0	0	59.0626	59.0626	4	14.7656	1.2390
0	3	3	2	0	0	0	0	62.0973	62.0973	4	15.5243	1.9976
0	3	4	1	0	0	0	0	57.0388	57.0388	4	14.2388	0.7390
0	3	4	2	0	0	0	0	48.5986	48.5986	4	12.1446	-1.3770
0	3	5	1	0	0	0	0	60.8954	60.8954	4	15.2238	1.6972
0	3	5	2	0	0	0	0	57.8156	57.8156	4	14.4539	0.9272
8								196.9929				
1	1	1	1	0	0	0	0	12.8089	12.8089	1	12.8089	-0.7178
1	1	1	2	0	0	0	0	12.6190	12.6190	1	12.6190	-0.9077
1	1	2	1	0	0	0	0	12.5418	12.5418	1	12.5418	-0.9849
1	1	2	2	0	0	0	0	12.5509	12.5509	1	12.5509	-0.9758
1	1	3	1	0	0	0	0	12.6900	12.6900	1	12.6900	-0.8367
1	1	3	2	0	0	0	0	12.4018	12.4018	1	12.4018	-1.1249
1	1	4	1	0	0	0	0	13.2750	13.2750	1	13.2750	-0.2517
1	1	4	2	0	0	0	0	12.9433	12.9433	1	12.9433	-0.5834
1	1	5	1	0	0	0	0	12.8187	12.8187	1	12.8187	-0.7080
1	1	5	2	0	0	0	0	12.4775	12.4775	1	12.4775	-1.0492
1	2	1	1	0	0	0	0	14.6220	14.6220	1	14.6220	1.0953
1	2	1	2	0	0	0	0	14.4055	14.4055	1	14.4055	0.8788
1	2	2	1	0	0	0	0	14.4045	14.4045	1	14.4045	0.8778
1	2	2	2	0	0	0	0	13.8310	13.8310	1	13.8310	0.3063
1	2	3	1	0	0	0	0	14.9960	14.9960	1	14.9960	1.4693
1	2	3	2	0	0	0	0	15.0232	15.0232	1	15.0232	1.4965
1	2	4	1	0	0	0	0	15.4665	15.4665	1	15.4665	1.9398
1	2	4	2	0	0	0	0	13.5931	13.5931	1	13.5931	0.0044
1	2	5	1	0	0	0	0	14.0515	14.0515	1	14.0515	0.5248
1	2	5	2	0	0	0	0	13.9244	13.9244	1	13.9244	0.3987
1	3	1	1	0	0	0	0	16.2000	16.2000	1	16.2000	2.6733
1	3	1	2	0	0	0	0	15.7604	15.7604	1	15.7604	2.2337
1	3	2	1	0	0	0	0	14.6433	14.6433	1	14.6433	1.1166
1	3	2	2	0	0	0	0	14.0975	14.0975	1	14.0975	0.8880
1	3	3	1	0	0	0	0	15.6012	15.6012	1	15.6012	0.8709
1	3	3	2	0	0	0	0	15.8966	15.8966	1	15.8966	0.3099
1	3	4	1	0	0	0	0	15.8725	15.8725	1	15.8725	2.3458
1	3	4	2	0	0	0	0	16.4075	16.4075	1	16.4075	2.8808
1	3	5	1	0	0	0	0	15.8533	15.8533	1	15.8533	2.3266
1	3	5	2	0	0	0	0	15.5558	15.5558	1	15.5558	1.8808
2	1	1	1	0	0	0	0	12.4045	12.4045	1	12.4045	-0.9077
2	1	1	2	0	0	0	0	12.4775	12.4775	1	12.4775	-1.0492

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/90	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	1	2	1	0	0	0	0	12.2730		12.2730	1	12.2730	-1.2537
2	1	2	2	0	0	0	0	11.9754		11.9754	1	11.9754	-1.5513
2	1	3	1	0	0	0	0	12.5609		12.5609	1	12.5609	-0.9658
2	1	3	2	0	0	0	0	12.5953		12.5953	1	12.5953	-0.9314
2	1	4	1	0	0	0	0	12.6758		12.6758	1	12.6758	-0.8509
2	1	4	2	0	0	0	0	12.3423		12.3423	1	12.3423	-1.1844
2	1	5	1	0	0	0	0	11.9789		11.9789	1	11.9789	-1.5478
2	1	5	2	0	0	0	0	11.9169		11.9169	1	11.9169	-1.6098
2	2	1	1	0	0	0	0	14.8522		14.8522	1	14.8522	1.3255
2	2	1	2	0	0	0	0	14.5065		14.5065	1	14.5065	0.9798
2	2	2	1	0	0	0	0	14.1072		14.1072	1	14.1072	0.5805
2	2	2	2	0	0	0	0	13.8840		13.8840	1	13.8840	0.3573
2	2	3	1	0	0	0	0	14.9270		14.9270	1	14.9270	1.4003
2	2	3	2	0	0	0	0	15.1630		15.1630	1	15.1630	1.6363
2	2	4	1	0	0	0	0	15.1391		15.1391	1	15.1391	1.6124
2	2	4	2	0	0	0	0	14.1809		14.1809	1	14.1809	0.6542
2	2	5	1	0	0	0	0	13.9633		13.9633	1	13.9633	0.4366
2	2	5	2	0	0	0	0	13.9239		13.9239	1	13.9239	0.3972
2	3	1	1	0	0	0	0	15.3429		15.3429	1	15.3429	1.8162
2	3	1	2	0	0	0	0	15.1214		15.1214	1	15.1214	1.5947
2	3	2	1	0	0	0	0	14.9303		14.9303	1	14.9303	1.4036
2	3	2	2	0	0	0	0	15.1386		15.1386	1	15.1386	1.6119
2	3	3	1	0	0	0	0	15.1538		15.1538	1	15.1538	1.6271
2	3	3	2	0	0	0	0	16.3532		16.3532	1	16.3532	2.8265
2	3	4	1	0	0	0	0	15.6511		15.6511	1	15.6511	2.1244
2	3	4	2	0	0	0	0	16.3471		16.3471	1	16.3471	2.8204
2	3	5	1	0	0	0	0	16.3067		16.3067	1	16.3067	2.7800
2	3	5	2	0	0	0	0	15.8538		15.8538	1	15.8538	2.3271
3	1	1	1	0	0	0	0	12.9029		12.9029	1	12.9029	-0.6238
3	1	1	2	0	0	0	0	10.2953		10.2953	1	10.2953	-3.2314
3	1	2	1	0	0	0	0	12.3006		12.3006	1	12.3006	-1.2261
3	1	2	2	0	0	0	0	11.5529		11.5529	1	11.5529	-1.9738
3	1	3	1	0	0	0	0	12.1688		12.1688	1	12.1688	-1.3579
3	1	3	2	0	0	0	0	12.7508		12.7508	1	12.7508	-0.7759
3	1	4	1	0	0	0	0	13.1050		13.1050	1	13.1050	-0.4217
3	1	4	2	0	0	0	0	7.6882		7.6882	1	7.6882	-5.8385
3	1	5	1	0	0	0	0	12.1150		12.1150	1	12.1150	-1.4117
3	1	5	2	0	0	0	0	12.2521		12.2521	1	12.2521	-1.2746
3	2	1	1	0	0	0	0	14.5206		14.5206	1	14.5206	0.9939
3	2	1	2	0	0	0	0	14.2436		14.2436	1	14.2436	0.7189
3	2	2	1	0	0	0	0	13.7732		13.7732	1	13.7732	0.2465
3	2	2	2	0	0	0	0	13.5590		13.5590	1	13.5590	0.0323
3	2	3	1	0	0	0	0	14.7458		14.7458	1	14.7458	1.2191
3	2	3	2	0	0	0	0	14.9632		14.9632	1	14.9632	1.4365
3	2	4	1	0	0	0	0	14.6470		14.6470	1	14.6470	1.1203
3	2	4	2	0	0	0	0	11.0158		11.0158	1	11.0158	-2.5109
3	2	5	1	0	0	0	0	13.8873		13.8873	1	13.8873	0.3604
3	2	5	2	0	0	0	0	13.7708		13.7708	1	13.7708	0.2441
3	3	1	1	0	0	0	0	14.3359		14.3359	1	14.3359	0.8092
3	3	1	2	0	0	0	0	13.6363		13.6363	1	13.6363	0.1096
3	3	2	1	0	0	0	0	13.6846		13.6846	1	13.6846	0.1579
3	3	2	2	0	0	0	0	14.2527		14.2527	1	14.2527	0.7280
3	3	3	1	0	0	0	0	14.3359		14.3359	1	14.3359	0.8092
3	3	3	2	0	0	0	0	15.1300		15.1300	1	15.1300	1.6033
3	3	4	1	0	0	0	0	12.9528		12.9528	1	12.9528	-0.5739
3	3	4	2	0	0	0	0	7.1650		7.1650	1	7.1650	-6.3617
3	3	5	1	0	0	0	0	14.5443		14.5443	1	14.5443	1.0176
3	3	5	2	0	0	0	0	13.4133		13.4133	1	13.4133	-0.1132
4	1	1	1	0	0	0	0	13.2786		13.2786	1	13.2786	-0.2401
4	1	1	2	0	0	0	0	10.5256		10.5256	1	10.5256	-3.0011
4	1	2	1	0	0	0	0	12.0813		12.0813	1	12.0813	-1.4454
4	1	2	2	0	0	0	0	11.2350		11.2350	1	11.2350	-2.2917
4	1	3	1	0	0	0	0	11.6925		11.6925	1	11.6925	-1.8342
4	1	3	2	0	0	0	0	12.3420		12.3420	1	12.3420	-1.1891
4	1	4	1	0	0	0	0	12.7211		12.7211	1	12.7211	-0.8056
4	1	4	2	0	0	0	0	9.4709		9.4709	1	9.4709	-4.0958

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE OIL/Lb	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
4	1	5	1	0	0	0	0	11.9020		11.9020	1	11.9020	-1.6247
4	1	5	2	0	0	0	0	11.9877		11.9877	1	11.9877	-1.5399
4	2	1	1	0	0	0	0	13.9433		13.9433	1	13.9433	0.4166
4	2	1	2	0	0	0	0	12.6458		12.6458	1	12.6458	-0.8887
4	2	2	1	0	0	0	0	13.3149		13.3149	1	13.3149	-0.2118
4	2	2	2	0	0	0	0	13.2522		13.2522	1	13.2522	-0.2743
4	2	3	1	0	0	0	0	14.3487		14.3487	1	14.3487	0.8220
4	2	3	2	0	0	0	0	15.2422		15.2422	1	15.2422	1.7155
4	2	4	1	0	0	0	0	13.8765		13.8765	1	13.8765	0.3498
4	2	4	2	0	0	0	0	9.1090		9.1090	1	9.1090	-0.6177
4	2	5	1	0	0	0	0	13.8600		13.8600	1	13.8600	0.3398
4	2	5	2	0	0	0	0	13.6792		13.6792	1	13.6792	0.1823
4	3	1	1	0	0	0	0	14.0915		14.0915	1	14.0915	0.5648
4	3	1	2	0	0	0	0	13.1142		13.1142	1	13.1142	-0.4125
4	3	2	1	0	0	0	0	13.3869		13.3869	1	13.3869	-0.1398
4	3	2	2	0	0	0	0	13.9433		13.9433	1	13.9433	0.4166
4	3	3	1	0	0	0	0	13.9717		13.9717	1	13.9717	0.4494
4	3	3	2	0	0	0	0	14.7175		14.7175	1	14.7175	1.1948
4	3	4	1	0	0	0	0	12.5622		12.5622	1	12.5622	-0.9645
4	3	4	2	0	0	0	0	8.6790		8.6790	1	8.6790	-4.8477
4	3	5	1	0	0	0	0	14.1911		14.1911	1	14.1911	0.6644
4	3	5	2	0	0	0	0	12.9925		12.9925	1	12.9925	-0.5588
24									349.6204				

TABLE 8.2-8 TELPS N-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								DEG. FREEDOM	SS	MEAN SQUARE		
A	B	C	D	E	F	G	H					
1	0	0	0	0	0	0	0	A	3	53.7511	17.9170	*
0	1	0	0	0	0	0	0	B	2	122.3062	61.1531	*
0	0	1	0	0	0	0	0	C	4	24.2752	6.0688	*
0	0	0	1	0	0	0	0	D	1	13.0056	13.0056	*
1	1	0	0	0	0	0	0	AB	6	17.2333	2.8722	
1	0	1	0	0	0	0	0	AC	12	34.1184	2.8432	
1	0	0	1	0	0	0	0	AD	3	7.6875	2.5625	
0	1	1	0	0	0	0	0	BC	8	6.4626	0.8078	
0	1	0	1	0	0	0	0	BD	2	0.4290	0.2145	
0	0	1	1	0	0	0	0	CD	4	28.1643	7.0411	*
1	1	1	0	0	0	0	0	ABC	24	12.3032	0.5126	
1	1	0	1	0	0	0	0	ABD	6	1.1603	0.1934	
1	0	1	1	0	0	0	0	ACD	12	21.0438	1.7536	
0	1	1	1	0	0	0	0	BCD	8	2.3500	0.2937	
1	1	1	1	0	0	0	0	ABCD	24	5.3299	0.2221	
RESIDUAL								0	0.0012	0.0		

* 5% SIGNIFICANT BASED ON ERROR MS = 1.4347 W/80 df

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	1	0	0	0	0	70.60990	70.60990	4985.75798	1
1	1	1	2	0	0	0	0	66.50790	66.50790	4423.30076	1
1	1	2	1	0	0	0	0	67.06260	67.06260	4497.39232	1
1	1	2	2	0	0	0	0	67.12900	67.12900	4506.30264	1
1	1	3	1	0	0	0	0	67.69190	67.69190	4582.19333	1
1	1	3	2	0	0	0	0	67.36400	67.36400	4537.90850	1
1	1	4	1	0	0	0	0	67.30180	67.30180	4529.53228	1
1	1	4	2	0	0	0	0	66.84100	66.84100	4467.71928	1
1	1	5	1	0	0	0	0	67.22990	67.22990	4519.85945	1
1	1	5	2	0	0	0	0	67.01240	67.01240	4490.66175	1
1	2	1	1	0	0	0	0	84.69590	84.69590	7173.39548	1
1	2	1	2	0	0	0	0	83.83270	83.83270	7027.92159	1
1	2	2	1	0	0	0	0	83.18090	83.18090	6919.06212	1
1	2	2	2	0	0	0	0	82.75790	82.75790	6848.87001	1
1	2	3	1	0	0	0	0	83.76200	83.76200	7016.07264	1
1	2	3	2	0	0	0	0	83.25580	83.25580	6931.52823	1
1	2	4	1	0	0	0	0	83.03800	83.03800	6895.30944	1
1	2	4	2	0	0	0	0	81.96600	81.96600	6718.42516	1
1	2	5	1	0	0	0	0	83.40920	83.40920	6957.09464	1
1	2	5	2	0	0	0	0	82.42010	82.42010	6793.07288	1
1	3	1	1	0	0	0	0	103.30000	103.30000	10670.89000	1
1	3	1	2	0	0	0	0	97.01120	97.01120	9411.17293	1
1	3	2	1	0	0	0	0	96.15820	96.15820	9246.39943	1
1	3	2	2	0	0	0	0	97.02490	97.02490	9413.83122	1
1	3	3	1	0	0	0	0	97.38740	97.38740	9484.30568	1
1	3	3	2	0	0	0	0	97.68870	97.68870	9543.08211	1
1	3	4	1	0	0	0	0	94.65940	94.65940	8960.40201	1
1	3	4	2	0	0	0	0	95.17990	95.17990	9059.21336	1
1	3	5	1	0	0	0	0	95.65490	95.65490	9149.85989	1
1	3	5	2	0	0	0	0	95.69320	95.69320	9157.18853	1
2	1	1	1	0	0	0	0	64.16360	64.16360	4116.96756	1
2	1	1	2	0	0	0	0	65.37880	65.37880	4274.38749	1
2	1	2	1	0	0	0	0	64.76560	64.76560	4194.58294	1
2	1	2	2	0	0	0	0	63.75540	63.75540	4064.75103	1
2	1	3	1	0	0	0	0	66.71990	66.71990	4451.54506	1
2	1	3	2	0	0	0	0	66.01730	66.01730	4358.28390	1
2	1	4	1	0	0	0	0	65.21710	65.21710	4253.27013	1
2	1	4	2	0	0	0	0	64.37100	64.37100	4143.62564	1
2	1	5	1	0	0	0	0	63.30520	63.30520	4007.54835	1
2	1	5	2	0	0	0	0	63.86710	63.86710	4079.00646	1
2	2	1	1	0	0	0	0	82.97660	82.97660	6876.82099	1
2	2	1	2	0	0	0	0	81.39940	81.39940	6625.86232	1
2	2	2	1	0	0	0	0	79.20060	79.20060	6272.73504	1
2	2	2	2	0	0	0	0	79.15590	79.15590	6265.65650	1
2	2	3	1	0	0	0	0	80.69090	80.69090	6511.02134	1
2	2	3	2	0	0	0	0	81.85630	81.85630	6700.45385	1
2	2	4	1	0	0	0	0	81.23670	81.23670	6599.40143	1
2	2	4	2	0	0	0	0	78.72900	78.72900	6198.25544	1
2	2	5	1	0	0	0	0	79.55000	79.55000	6328.20250	1
2	2	5	2	0	0	0	0	80.12390	80.12390	6419.83935	1
2	3	1	1	0	0	0	0	94.91700	94.91700	9009.23689	1
2	3	1	2	0	0	0	0	93.92660	93.92660	8822.20619	1
2	3	2	1	0	0	0	0	92.08420	92.08420	8479.49989	1
2	3	2	2	0	0	0	0	93.38990	93.38990	8721.67342	1
2	3	3	1	0	0	0	0	91.27060	91.27060	8330.32242	1
2	3	3	2	0	0	0	0	96.23570	96.23570	9261.30995	1
2	3	4	1	0	0	0	0	92.95250	92.95250	8640.16726	1
2	3	4	2	0	0	0	0	92.59280	92.59280	8573.42661	1

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

A	B	C	D	E	F	G	H	X1	X2	X3	W
2	3	3	1	0	0	0	0	92.79330	92.79330	94.10.39552	1
2	3	5	2	0	0	0	0	94.36410	94.36410	9904.28337	1
3	1	1	1	0	0	0	0	65.44050	65.44050	4282.45904	1
3	1	1	2	0	0	0	0	60.34250	60.34250	3641.21731	1
3	1	2	1	0	0	0	0	62.77760	62.77760	3941.02706	1
3	1	2	2	0	0	0	0	62.15170	62.15170	3862.83381	1
3	1	3	1	0	0	0	0	64.89640	64.89640	4211.54273	1
3	1	3	2	0	0	0	0	65.14210	65.14210	4243.49319	1
3	1	4	1	0	0	0	0	64.07190	64.07190	4105.20837	1
3	1	4	2	0	0	0	0	53.04810	53.04810	2814.10091	1
3	1	5	1	0	0	0	0	61.89330	61.89330	3830.78058	1
3	1	5	2	0	0	0	0	63.39030	63.39030	4018.33013	1
3	2	1	1	0	0	0	0	80.33920	80.33920	6454.38706	1
3	2	1	2	0	0	0	0	80.15460	80.15460	6424.75990	1
3	2	2	1	0	0	0	0	75.81770	75.81770	5748.32363	1
3	2	2	2	0	0	0	0	78.01660	78.01660	6086.58988	1
3	2	3	1	0	0	0	0	79.57400	79.57400	6332.02148	1
3	2	3	2	0	0	0	0	80.43960	80.43960	6470.52925	1
3	2	4	1	0	0	0	0	78.26520	78.26520	6125.44153	1
3	2	4	2	0	0	0	0	69.81160	69.81160	4873.65949	1
3	2	5	1	0	0	0	0	75.82540	75.82540	5749.49129	1
3	2	5	2	0	0	0	0	78.27300	78.27300	6126.88253	1
3	3	1	1	0	0	0	0	87.63870	87.63870	7680.54174	1
3	3	1	2	0	0	0	0	88.25380	88.25380	7788.73321	1
3	3	2	1	0	0	0	0	86.65330	86.65330	7508.79440	1
3	3	2	2	0	0	0	0	90.08990	90.08990	8116.19008	1
3	3	3	1	0	0	0	0	88.82280	88.82280	7889.48980	1
3	3	3	2	0	0	0	0	92.27670	92.27670	8514.98936	1
3	3	4	1	0	0	0	0	86.34200	86.34200	7454.94096	1
3	3	4	2	0	0	0	0	81.03350	81.03350	6566.42812	1
3	3	5	1	0	0	0	0	87.85420	87.85420	7718.36046	1
3	3	5	2	0	0	0	0	90.11850	90.11850	8121.34404	1
4	1	1	1	0	0	0	0	64.07990	64.07990	4106.23358	1
4	1	1	2	0	0	0	0	61.02740	61.02740	3724.34359	1
4	1	2	1	0	0	0	0	62.45240	62.45240	3900.30227	1
4	1	2	2	0	0	0	0	62.07740	62.07740	3853.60359	1
4	1	3	1	0	0	0	0	64.52740	64.52740	4163.78535	1
4	1	3	2	0	0	0	0	65.07720	65.07720	4235.04196	1
4	1	4	1	0	0	0	0	62.99460	62.99460	3968.31963	1
4	1	4	2	0	0	0	0	56.73180	56.73180	3218.49713	1
4	1	5	1	0	0	0	0	61.50890	61.50890	3783.34478	1
4	1	5	2	0	0	0	0	63.04550	63.04550	3974.73507	1
4	2	1	1	0	0	0	0	79.29330	79.29330	6287.42742	1
4	2	1	2	0	0	0	0	75.85240	75.85240	5753.58659	1
4	2	2	1	0	0	0	0	74.58920	74.58920	5563.54876	1
4	2	2	2	0	0	0	0	77.62770	77.62770	6026.03981	1
4	2	3	1	0	0	0	0	78.69120	78.69120	6192.30496	1
4	2	3	2	0	0	0	0	79.88900	79.88900	6382.25232	1
4	2	4	1	0	0	0	0	77.00090	77.00090	5929.13860	1
4	2	4	2	0	0	0	0	67.38790	67.38790	4541.12907	1
4	2	5	1	0	0	0	0	76.00210	76.00210	5776.31920	1
4	2	5	2	0	0	0	0	77.87520	77.87520	6084.34678	1
4	3	1	1	0	0	0	0	87.13910	87.13910	7593.22275	1
4	3	1	2	0	0	0	0	87.98910	87.98910	7742.08172	1
4	3	2	1	0	0	0	0	86.16180	86.16180	7423.85578	1
4	3	2	2	0	0	0	0	90.26910	90.26910	8148.51041	1
4	3	3	1	0	0	0	0	86.28990	86.28990	7445.94684	1
4	3	3	2	0	0	0	0	92.11790	92.11790	8489.70750	1
4	3	4	1	0	0	0	0	85.27420	85.27420	7271.68919	1
4	3	4	2	0	0	0	0	80.59290	80.59290	6495.21553	1
4	3	5	1	0	0	0	0	87.75430	87.75430	7700.81717	1
4	3	5	2	0	0	0	0	89.47490	89.47490	8005.75773	1

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

ANALYSIS OF VARIANCE								TEPLS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE							
SOURCE								DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F	
BETWEEN								119		16617.3660		0.0		0.0	
WITHIN								0		0.0		0.0			
TOTAL								119		16617.3660					

SOURCE								SUM X1		CRUDE		SUM X2		FREQUENCY		MEAN X1		EFFECT X1	
A	B	C	D	E	F	G	H	SUM/SQ											
1	0	0	0	0	0	0	0	2476.8267		2476.8267		30		82.5609		4.1998			
2	0	0	0	0	0	0	0	2386.9570		2386.9570		30		79.5652		1.2041			
3	0	0	0	0	0	0	0	2278.7547		2278.7547		30		75.9585		-2.4026			
4	0	0	0	0	0	0	0	2260.7946		2260.7946		30		75.3598		-3.0013			
3								1016.0517											
0	1	0	0	0	0	0	0	2568.9883		2568.9883		40		64.2247		-14.1364			
0	2	0	0	0	0	0	0	3177.9136		3177.9136		40		79.4478		1.0867			
0	3	0	0	0	0	0	0	3656.4311		3656.4311		40		91.4108		13.0497			
2								14852.5072											
0	0	1	0	0	0	0	0	1906.2201		1906.2201		24		79.4258		1.0647			
0	0	2	0	0	0	0	0	1874.3495		1874.3495		24		78.0979		-0.2632			
0	0	3	0	0	0	0	0	1917.6847		1917.6847		24		79.9035		1.5424			
0	0	4	0	0	0	0	0	1826.8398		1826.8398		24		76.1100		-2.2511			
0	0	5	0	0	0	0	0	1878.4389		1878.4389		24		78.2683		-0.0928			
4								207.7952											
0	0	0	1	0	0	0	0	4716.9072		4716.9072		60		78.6151		0.2540			
0	0	0	2	0	0	0	0	4686.4258		4686.4258		60		78.1071		-0.2540			
1								7.7426											
1	1	0	0	0	0	0	0	674.7504		674.7504		10		67.4750		-10.8861			
1	2	0	0	0	0	0	0	832.3185		832.3185		10		83.2318		4.8707			
1	3	0	0	0	0	0	0	969.7578		969.7578		10		96.9758		18.6147			
2	1	0	0	0	0	0	0	647.5610		647.5610		10		64.7561		-13.6050			
2	2	0	0	0	0	0	0	804.8693		804.8693		10		80.4869		2.1258			
2	3	0	0	0	0	0	0	934.5267		934.5267		10		93.4527		15.0916			
3	1	0	0	0	0	0	0	623.1544		623.1544		10		62.3154		-16.0457			
3	2	0	0	0	0	0	0	776.5169		776.5169		10		77.6517		-0.7094			
3	3	0	0	0	0	0	0	879.0834		879.0834		10		87.9083		9.9472			
4	1	0	0	0	0	0	0	623.5225		623.5225		10		62.3522		-16.0089			
4	2	0	0	0	0	0	0	764.2089		764.2089		10		76.4209		-1.9402			
4	3	0	0	0	0	0	0	873.0632		873.0632		10		87.3063		8.9452			
6								15952.8840											
1	0	1	0	0	0	0	0	505.9576		505.9576		6		84.3263		5.9652			
1	0	2	0	0	0	0	0	493.3135		493.3135		6		82.2189		3.8578			
1	0	3	0	0	0	0	0	497.1498		497.1498		6		82.8583		4.4972			
1	0	4	0	0	0	0	0	488.9861		488.9861		6		81.4977		3.1366			
1	0	5	0	0	0	0	0	491.4197		491.4197		6		81.9033		3.5422			
2	0	1	0	0	0	0	0	482.7120		482.7120		6		80.4520		2.0009			
2	0	2	0	0	0	0	0	472.3516		472.3516		6		78.7253		0.3642			
2	0	3	0	0	0	0	0	482.7907		482.7907		6		80.4651		2.1040			

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	0	4	0	0	0	0	0	475.0941	475.0941	475.0941	6	79.1837	0.8221
2	0	5	0	0	0	0	0	474.0036	474.0036	474.0036	6	79.0006	0.6395
3	0	1	0	0	0	0	0	462.1693	462.1693	462.1693	6	77.0262	-1.3329
3	0	2	0	0	0	0	0	455.5068	455.5068	455.5068	6	75.9176	-2.4453
3	0	3	0	0	0	0	0	471.1516	471.1516	471.1516	6	78.5253	0.1642
3	0	4	0	0	0	0	0	432.5723	432.5723	432.5723	6	72.0954	-6.2657
3	0	5	0	0	0	0	0	457.3547	457.3547	457.3547	6	76.2258	-2.1353
4	0	1	0	0	0	0	0	455.3812	455.3812	455.3812	6	75.8969	-2.4642
4	0	2	0	0	0	0	0	453.1776	453.1776	453.1776	6	75.5296	-2.8315
4	0	3	0	0	0	0	0	466.5926	466.5926	466.5926	6	77.7654	-0.3957
4	0	4	0	0	0	0	0	429.9823	429.9823	429.9823	6	71.6637	-6.6974
4	0	5	0	0	0	0	0	455.6609	455.6609	455.6609	6	75.9435	-2.4176
12								1318.9718					
1	0	0	1	0	0	0	0	1245.1420	1245.1420	1245.1420	15	83.0095	4.8484
1	0	0	2	0	0	0	0	1231.6847	1231.6847	1231.6847	15	82.1123	3.7512
2	0	0	1	0	0	0	0	1191.7938	1191.7938	1191.7938	15	79.4529	1.0918
2	0	0	2	0	0	0	0	1195.1632	1195.1632	1195.1632	15	79.6775	1.3164
3	0	0	1	0	0	0	0	1146.2122	1146.2122	1146.2122	15	76.4141	-1.9470
3	0	0	2	0	0	0	0	1132.5425	1132.5425	1132.5425	15	75.5028	-2.8583
4	0	0	1	0	0	0	0	1133.7592	1133.7592	1133.7592	15	75.5839	-2.7772
4	0	0	2	0	0	0	0	1127.0354	1127.0354	1127.0354	15	75.1357	-3.2254
3								1030.2024					
0	1	1	0	0	0	0	0	517.5505	517.5505	517.5505	8	64.6938	-13.6673
0	1	2	0	0	0	0	0	512.1717	512.1717	512.1717	8	64.0213	-14.3396
0	1	3	0	0	0	0	0	527.4362	527.4362	527.4362	8	65.9295	-12.4316
0	1	4	0	0	0	0	0	500.5773	500.5773	500.5773	8	62.5782	-15.7889
0	1	5	0	0	0	0	0	511.2526	511.2526	511.2526	8	63.9066	-14.4545
0	2	1	0	0	0	0	0	648.4941	648.4941	648.4941	8	81.0618	2.7007
0	2	2	0	0	0	0	0	630.3465	630.3465	630.3465	8	78.7933	0.4322
0	2	3	0	0	0	0	0	648.1588	648.1588	648.1588	8	81.0198	2.6387
0	2	4	0	0	0	0	0	617.4353	617.4353	617.4353	8	77.1794	-1.1617
0	2	5	0	0	0	0	0	633.4789	633.4789	633.4789	8	79.1849	0.8238
0	3	1	0	0	0	0	0	740.1755	740.1755	740.1755	8	92.5219	14.1608
0	3	2	0	0	0	0	0	731.8313	731.8313	731.8313	8	91.4789	13.1178
0	3	3	0	0	0	0	0	742.0897	742.0897	742.0897	8	92.7612	14.4001
0	3	4	0	0	0	0	0	708.6272	708.6272	708.6272	8	88.5784	10.2173
0	3	5	0	0	0	0	0	733.7074	733.7074	733.7074	8	91.7134	13.3523
8								15075.6762					
0	1	0	1	0	0	0	0	1298.7104	1298.7104	1298.7104	20	64.9355	-13.4256
0	1	0	2	0	0	0	0	1270.2779	1270.2779	1270.2779	20	63.5139	-16.8478
0	2	0	1	0	0	0	0	1597.0890	1597.0890	1597.0890	20	79.8544	1.4933
0	2	0	2	0	0	0	0	1580.8246	1580.8246	1580.8246	20	79.0412	0.6601
0	3	0	1	0	0	0	0	1821.1078	1821.1078	1821.1078	20	91.0554	12.6943
0	3	0	2	0	0	0	0	1835.3233	1835.3233	1835.3233	20	91.7662	13.4051
2								14884.3826					
0	0	1	1	0	0	0	0	964.5437	964.5437	964.5437	12	80.3788	2.0173
0	0	1	2	0	0	0	0	941.6764	941.6764	941.6764	12	78.4730	0.1119
0	0	2	1	0	0	0	0	930.9041	930.9041	930.9041	12	77.5753	-0.7858
0	0	2	2	0	0	0	0	943.4454	943.4454	943.4454	12	78.6204	0.2593
0	0	3	1	0	0	0	0	950.3244	950.3244	950.3244	12	79.1931	0.8238
0	0	3	2	0	0	0	0	967.3603	967.3603	967.3603	12	80.8134	2.6387
0	0	4	1	0	0	0	0	938.3543	938.3543	938.3543	12	78.1849	0.8238
0	0	4	2	0	0	0	0	888.2855	888.2855	888.2855	12	74.0238	-1.3373
0	0	5	1	0	0	0	0	932.7807	932.7807	932.7807	12	77.7317	-0.6294
0	0	5	2	0	0	0	0	945.6582	945.6582	945.6582	12	78.8048	0.4437
4								399.9925					

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	1	1	0	0	0	0	0	137.1178	SUM 89	137.1178	2	68.5589	-9.8022
1	1	2	0	0	0	0	0	134.1916		134.1916	2	67.0958	-11.2653
1	1	3	0	0	0	0	0	135.0559		135.0559	2	67.5279	-10.8332
1	1	4	0	0	0	0	0	134.1428		134.1428	2	67.0714	-11.2897
1	1	5	0	0	0	0	0	134.2423		134.2423	2	67.1211	-11.2400
1	2	1	0	0	0	0	0	168.5286		168.5286	2	84.2643	5.9032
1	2	2	0	0	0	0	0	165.9388		165.9388	2	82.9694	4.6083
1	2	3	0	0	0	0	0	167.0178		167.0178	2	83.5089	5.1478
1	2	4	0	0	0	0	0	165.0040		165.0040	2	82.5020	4.1409
1	2	5	0	0	0	0	0	165.8293		165.8293	2	82.9146	4.5535
1	3	1	0	0	0	0	0	200.3112		200.3112	2	100.1556	21.7945
1	3	2	0	0	0	0	0	193.1831		193.1831	2	96.5915	18.2304
1	3	3	0	0	0	0	0	195.0761		195.0761	2	97.5380	19.1769
1	3	4	0	0	0	0	0	189.8393		189.8393	2	94.9196	16.5585
1	3	5	0	0	0	0	0	191.3481		191.3481	2	95.6740	17.3129
2	1	1	0	0	0	0	0	129.5424		129.5424	2	64.7712	-13.5899
2	1	2	0	0	0	0	0	128.5210		128.5210	2	64.2605	-14.1006
2	1	3	0	0	0	0	0	132.7372		132.7372	2	66.3686	-11.9925
2	1	4	0	0	0	0	0	129.5881		129.5881	2	64.7940	-13.5671
2	1	5	0	0	0	0	0	127.1723		127.1723	2	63.5861	-14.7750
2	2	1	0	0	0	0	0	164.3260		164.3260	2	82.1630	3.8019
2	2	2	0	0	0	0	0	158.3585		158.3585	2	79.1782	0.8171
2	2	3	0	0	0	0	0	162.5472		162.5472	2	81.2736	2.9125
2	2	4	0	0	0	0	0	159.9657		159.9657	2	79.9828	1.6217
2	2	5	0	0	0	0	0	159.6739		159.6739	2	79.8369	1.4758
2	3	1	0	0	0	0	0	188.8436		188.8436	2	94.4218	16.0607
2	3	2	0	0	0	0	0	185.4741		185.4741	2	92.7370	14.3759
2	3	3	0	0	0	0	0	187.5063		187.5063	2	93.7531	15.3920
2	3	4	0	0	0	0	0	185.5453		185.5453	2	92.7726	14.4115
2	3	5	0	0	0	0	0	187.1574		187.1574	2	93.5787	15.2176
3	1	1	0	0	0	0	0	125.7830		125.7830	2	62.8915	-15.4696
3	1	2	0	0	0	0	0	124.9293		124.9293	2	62.4646	-15.8965
3	1	3	0	0	0	0	0	130.0385		130.0385	2	65.0192	-13.3419
3	1	4	0	0	0	0	0	117.1200		117.1200	2	58.5600	-19.8011
3	1	5	0	0	0	0	0	125.2836		125.2836	2	62.6418	-15.7193
3	2	1	0	0	0	0	0	160.4938		160.4938	2	80.2469	1.8858
3	2	2	0	0	0	0	0	153.8343		153.8343	2	76.9171	-1.4440
3	2	3	0	0	0	0	0	160.0136		160.0136	2	80.0068	1.6457
3	2	4	0	0	0	0	0	148.0768		148.0768	2	74.0384	-4.3227
3	2	5	0	0	0	0	0	154.0984		154.0984	2	77.0492	-1.3119
3	3	1	0	0	0	0	0	175.8925		175.8925	2	87.9462	9.5851
3	3	2	0	0	0	0	0	176.7432		176.7432	2	88.3716	10.0105
3	3	3	0	0	0	0	0	181.0995		181.0995	2	90.5497	12.1886
3	3	4	0	0	0	0	0	167.3755		167.3755	2	83.6877	5.3266
3	3	5	0	0	0	0	0	177.9727		177.9727	2	88.9863	10.6252
4	1	1	0	0	0	0	0	125.1073		125.1073	2	62.5536	-13.8075
4	1	2	0	0	0	0	0	124.5298		124.5298	2	62.2649	-14.0962
4	1	3	0	0	0	0	0	129.6046		129.6046	2	64.8023	-13.5588
4	1	4	0	0	0	0	0	119.7264		119.7264	2	59.8632	-18.4979
4	1	5	0	0	0	0	0	124.5544		124.5544	2	62.2772	-16.0839
4	2	1	0	0	0	0	0	155.1457		155.1457	2	77.5728	-0.7883
4	2	2	0	0	0	0	0	152.2169		152.2169	2	76.1084	-2.2327
4	2	3	0	0	0	0	0	158.5802		158.5802	2	79.2901	0.9240
4	2	4	0	0	0	0	0	144.3888		144.3888	2	72.1944	-6.1467
4	2	5	0	0	0	0	0	153.8773		153.8773	2	76.9386	-1.4225
4	3	1	0	0	0	0	0	175.1282		175.1282	2	87.5641	9.2030
4	3	2	0	0	0	0	0	176.4309		176.4309	2	88.2154	9.8543
4	3	3	0	0	0	0	0	178.4078		178.4078	2	89.2039	10.4440
4	3	4	0	0	0	0	0	165.8671		165.8671	2	82.9335	4.9724
4	3	5	0	0	0	0	0	177.2292		177.2292	2	88.6146	10.2595
24								16296.1939					

1	1	0	1	0	0	0	0	334.0881		334.0881	2	167.0440	35.4176
1	1	0	2	0	0	0	0	334.8549		334.8549	2	167.4274	35.8548
1	2	0	1	0	0	0	0	410.8868		410.8868	2	205.4434	44.1984

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/RQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	2	0	2	0	0	0	0	414.2325		414.2325	5	82.8485	4.4854
1	3	0	1	0	0	0	0	487.1599		487.1599	5	97.4320	19.0709
1	3	0	2	0	0	0	0	482.5979		482.5979	5	96.5196	18.1585
2	1	0	1	0	0	0	0	324.1714		324.1714	5	64.8343	-13.5268
2	1	0	2	0	0	0	0	323.3896		323.3896	5	64.6779	-13.6832
2	2	0	1	0	0	0	0	403.6048		403.6048	5	80.7210	2.3599
2	2	0	2	0	0	0	0	401.2645		401.2645	5	80.2529	1.8918
2	3	0	1	0	0	0	0	464.0176		464.0176	5	92.8035	14.4424
2	3	0	2	0	0	0	0	470.5091		470.5091	5	94.1018	15.7407
3	1	0	1	0	0	0	0	319.0797		319.0797	5	63.8159	-14.5452
3	1	0	2	0	0	0	0	304.0747		304.0747	5	60.8149	-17.5462
3	2	0	1	0	0	0	0	389.8215		389.8215	5	77.9643	-0.3968
3	2	0	2	0	0	0	0	386.6954		386.6954	5	77.3391	-1.0220
3	3	0	1	0	0	0	0	437.3110		437.3110	5	87.4622	9.1011
3	3	0	2	0	0	0	0	441.7724		441.7724	5	88.3545	9.9934
4	1	0	1	0	0	0	0	315.5632		315.5632	5	63.1126	-15.2485
4	1	0	2	0	0	0	0	307.9593		307.9593	5	61.5919	-16.7692
4	2	0	1	0	0	0	0	385.5767		385.5767	5	77.1153	-1.2458
4	2	0	2	0	0	0	0	378.6322		378.6322	5	75.7264	-2.6347
4	3	0	1	0	0	0	0	432.6193		432.6193	5	86.5239	8.1628
4	3	0	2	0	0	0	0	440.4439		440.4439	5	88.0888	9.7277
6								16006.0245					
1	0	1	1	0	0	0	0	258.6058		258.6058	3	86.2019	7.8408
1	0	1	2	0	0	0	0	247.3518		247.3518	3	82.4506	4.0895
1	0	2	1	0	0	0	0	246.4017		246.4017	3	82.1339	3.7728
1	0	2	2	0	0	0	0	246.9118		246.9118	3	82.3039	3.9428
1	0	3	1	0	0	0	0	248.8413		248.8413	3	82.9471	4.5860
1	0	3	2	0	0	0	0	248.3085		248.3085	3	82.7895	4.4084
1	0	4	1	0	0	0	0	244.9992		244.9992	3	81.6664	3.3053
1	0	4	2	0	0	0	0	243.9869		243.9869	3	81.3290	2.9679
1	0	5	1	0	0	0	0	246.2940		246.2940	3	82.0980	3.7369
1	0	5	2	0	0	0	0	245.1257		245.1257	3	81.7088	3.3475
2	0	1	1	0	0	0	0	242.0072		242.0072	3	80.6691	2.3080
2	0	1	2	0	0	0	0	240.7048		240.7048	3	80.2349	1.8738
2	0	2	1	0	0	0	0	236.0504		236.0504	3	78.6835	0.3224
2	0	2	2	0	0	0	0	236.3012		236.3012	3	78.7671	0.4060
2	0	3	1	0	0	0	0	238.6814		238.6814	3	79.5605	1.1994
2	0	3	2	0	0	0	0	244.1093		244.1093	3	81.3898	3.0087
2	0	4	1	0	0	0	0	239.4063		239.4063	3	79.8021	1.4410
2	0	4	2	0	0	0	0	235.6928		235.6928	3	78.5643	0.2032
2	0	5	1	0	0	0	0	235.6485		235.6485	3	78.5495	0.1884
2	0	5	2	0	0	0	0	238.3551		238.3551	3	79.4517	1.0906
3	0	1	1	0	0	0	0	233.4184		233.4184	3	77.8061	-0.5550
3	0	1	2	0	0	0	0	228.7509		228.7509	3	76.2503	-2.1108
3	0	2	1	0	0	0	0	225.2486		225.2486	3	75.0829	-3.2782
3	0	2	2	0	0	0	0	230.2582		230.2582	3	76.7527	-1.6084
3	0	3	1	0	0	0	0	233.2932		233.2932	3	77.7644	-0.5967
3	0	3	2	0	0	0	0	237.8584		237.8584	3	79.2861	0.9250
3	0	4	1	0	0	0	0	228.6791		228.6791	3	76.2264	-2.1347
3	0	4	2	0	0	0	0	203.8932		203.8932	3	67.9644	-10.5967
3	0	5	1	0	0	0	0	225.5729		225.5729	3	75.1910	-3.1701
3	0	5	2	0	0	0	0	231.7818		231.7818	3	77.2606	-1.1005
4	0	1	1	0	0	0	0	230.5123		230.5123	3	76.8374	-1.5237
4	0	1	2	0	0	0	0	224.8689		224.8689	3	74.9563	-3.4048
4	0	2	1	0	0	0	0	223.2034		223.2034	3	74.4011	-3.9600
4	0	2	2	0	0	0	0	229.9742		229.9742	3	76.8981	-1.7030
4	0	3	1	0	0	0	0	229.5085		229.5085	3	76.5028	-1.8583
4	0	3	2	0	0	0	0	237.0841		237.0841	3	79.0280	0.6669
4	0	4	1	0	0	0	0	225.2697		225.2697	3	75.0899	-3.2712
4	0	4	2	0	0	0	0	204.7126		204.7126	3	68.2375	-10.1236
4	0	5	1	0	0	0	0	225.2653		225.2653	3	75.0884	-3.2727
4	0	5	2	0	0	0	0	230.3958		230.3958	3	76.7988	-1.5826
12								1566.7273					

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/8Q	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
0	1	1	1	0	0	0	0	264.2939		264.2939	4	66.0735	-12.2676
0	1	1	2	0	0	0	0	253.2566		253.2566	4	63.3141	-15.0470
0	1	2	1	0	0	0	0	257.0582		257.0582	4	64.2645	-14.0966
0	1	2	2	0	0	0	0	255.1135		255.1135	4	63.7784	-14.5827
0	1	3	1	0	0	0	0	263.8356		263.8356	4	65.9589	-12.4022
0	1	3	2	0	0	0	0	263.6006		263.6006	4	65.9001	-12.4610
0	1	4	1	0	0	0	0	259.5854		259.5854	4	64.8963	-13.4648
0	1	4	2	0	0	0	0	240.9919		240.9919	4	60.2480	-18.1131
0	1	5	1	0	0	0	0	253.9373		253.9373	4	63.4843	-14.8768
0	1	5	2	0	0	0	0	257.3153		257.3153	4	64.3288	-14.0323
0	2	1	1	0	0	0	0	327.2550		327.2550	4	81.8137	3.4526
0	2	1	2	0	0	0	0	321.2391		321.2391	4	80.3098	1.9487
0	2	2	1	0	0	0	0	312.7884		312.7884	4	78.1971	-0.1640
0	2	2	2	0	0	0	0	317.5581		317.5581	4	79.3895	1.0284
0	2	3	1	0	0	0	0	322.7181		322.7181	4	80.6795	2.3184
0	2	3	2	0	0	0	0	325.4407		325.4407	4	81.3602	2.9991
0	2	4	1	0	0	0	0	319.5408		319.5408	4	79.8852	1.5241
0	2	4	2	0	0	0	0	297.8945		297.8945	4	74.4736	-3.8875
0	2	5	1	0	0	0	0	314.7867		314.7867	4	78.6967	0.3356
0	2	5	2	0	0	0	0	318.6922		318.6922	4	79.6730	1.3119
0	3	1	1	0	0	0	0	372.9948		372.9948	4	93.2487	14.8876
0	3	1	2	0	0	0	0	367.1807		367.1807	4	91.7952	13.4341
0	3	2	1	0	0	0	0	361.0575		361.0575	4	90.2644	11.9033
0	3	2	2	0	0	0	0	370.7738		370.7738	4	92.6934	14.3323
0	3	3	1	0	0	0	0	363.7707		363.7707	4	90.9427	12.5816
0	3	3	2	0	0	0	0	378.3190		378.3190	4	94.5797	16.2186
0	3	4	1	0	0	0	0	359.2281		359.2281	4	89.8070	11.4459
0	3	4	2	0	0	0	0	349.3991		349.3991	4	87.3498	8.9887
0	3	5	1	0	0	0	0	364.0567		364.0567	4	91.0142	12.6531
0	3	5	2	0	0	0	0	369.6507		369.6507	4	92.4127	14.0516
8								15263.2665					
1	1	1	1	0	0	0	0	70.6099		70.6099	1	70.6099	-7.7512
1	1	1	2	0	0	0	0	66.5079		66.5079	1	66.5079	-11.8532
1	1	2	1	0	0	0	0	67.0626		67.0626	1	67.0626	-11.2985
1	1	2	2	0	0	0	0	67.1290		67.1290	1	67.1290	-11.2321
1	1	3	1	0	0	0	0	67.6919		67.6919	1	67.6919	-10.6692
1	1	3	2	0	0	0	0	67.3640		67.3640	1	67.3640	-10.9971
1	1	4	1	0	0	0	0	67.3018		67.3018	1	67.3018	-11.0593
1	1	4	2	0	0	0	0	66.8410		66.8410	1	66.8410	-11.5201
1	1	5	1	0	0	0	0	67.2299		67.2299	1	67.2299	-11.1312
1	1	5	2	0	0	0	0	67.0124		67.0124	1	67.0124	-11.3487
1	2	1	1	0	0	0	0	84.6959		84.6959	1	84.6959	6.3348
1	2	1	2	0	0	0	0	83.8327		83.8327	1	83.8327	9.4716
1	2	2	1	0	0	0	0	83.1809		83.1809	1	83.1809	4.8198
1	2	2	2	0	0	0	0	82.7579		82.7579	1	82.7579	4.3968
1	2	3	1	0	0	0	0	83.7620		83.7620	1	83.7620	5.4009
1	2	3	2	0	0	0	0	83.2558		83.2558	1	83.2558	4.8947
1	2	4	1	0	0	0	0	83.0380		83.0380	1	83.0380	4.6769
1	2	4	2	0	0	0	0	81.9660		81.9660	1	81.9660	3.6049
1	2	5	1	0	0	0	0	83.4092		83.4092	1	83.4092	5.0481
1	2	5	2	0	0	0	0	82.4201		82.4201	1	82.4201	4.0590
1	3	1	1	0	0	0	0	103.3000		103.3000	1	103.3000	24.9389
1	3	1	2	0	0	0	0	97.0112		97.0112	1	97.0112	18.6501
1	3	2	1	0	0	0	0	96.1582		96.1582	1	96.1582	17.7971
1	3	2	2	0	0	0	0	97.0249		97.0249	1	97.0249	18.6838
1	3	3	1	0	0	0	0	97.3874		97.3874	1	97.3874	19.0263
1	3	3	2	0	0	0	0	97.6887		97.6887	1	97.6887	19.3276
1	3	4	1	0	0	0	0	94.6594		94.6594	1	94.6594	16.2983
1	3	4	2	0	0	0	0	95.1799		95.1799	1	95.1799	16.8188
1	3	5	1	0	0	0	0	95.6549		95.6549	1	95.6549	17.2938
1	3	5	2	0	0	0	0	95.6932		95.6932	1	95.6932	17.3321
2	1	1	1	0	0	0	0	64.1636		64.1636	1	64.1636	-14.1973
2	1	1	2	0	0	0	0	65.3788		65.3788	1	65.3788	-12.9829

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	1	2	1	0	0	0	0	64.7656	64.7656	1	1	64.7656	-13.5955
2	1	2	2	0	0	0	0	63.7554	63.7554	1	1	63.7554	-14.6057
2	1	3	1	0	0	0	0	66.7199	66.7199	1	1	66.7199	-11.6412
2	1	3	2	0	0	0	0	66.0173	66.0173	1	1	66.0173	-12.3438
2	1	4	1	0	0	0	0	65.2171	65.2171	1	1	65.2171	-13.1440
2	1	4	2	0	0	0	0	64.3710	64.3710	1	1	64.3710	-13.9901
2	1	5	1	0	0	0	0	63.3052	63.3052	1	1	63.3052	-15.0559
2	1	5	2	0	0	0	0	63.8671	63.8671	1	1	63.8671	-14.4940
2	2	1	1	0	0	0	0	82.9266	82.9266	1	1	82.9266	4.5655
2	2	1	2	0	0	0	0	81.3994	81.3994	1	1	81.3994	3.0383
2	2	2	1	0	0	0	0	79.2006	79.2006	1	1	79.2006	0.8395
2	2	2	2	0	0	0	0	79.1559	79.1559	1	1	79.1559	0.7948
2	2	3	1	0	0	0	0	80.6909	80.6909	1	1	80.6909	2.3298
2	2	3	2	0	0	0	0	81.8563	81.8563	1	1	81.8563	3.4952
2	2	4	1	0	0	0	0	81.2367	81.2367	1	1	81.2367	2.8756
2	2	4	2	0	0	0	0	78.7290	78.7290	1	1	78.7290	0.3679
2	2	5	1	0	0	0	0	79.5500	79.5500	1	1	79.5500	1.1889
2	2	5	2	0	0	0	0	80.1239	80.1239	1	1	80.1239	1.7628
2	3	1	1	0	0	0	0	94.9170	94.9170	1	1	94.9170	16.5559
2	3	1	2	0	0	0	0	93.9266	93.9266	1	1	93.9266	15.5655
2	3	2	1	0	0	0	0	92.0842	92.0842	1	1	92.0842	13.7231
2	3	2	2	0	0	0	0	93.3899	93.3899	1	1	93.3899	15.0288
2	3	3	1	0	0	0	0	91.2706	91.2706	1	1	91.2706	12.9095
2	3	3	2	0	0	0	0	96.2357	96.2357	1	1	96.2357	17.8746
2	3	4	1	0	0	0	0	92.9525	92.9525	1	1	92.9525	14.5914
2	3	4	2	0	0	0	0	92.5928	92.5928	1	1	92.5928	14.2317
2	3	5	1	0	0	0	0	92.7933	92.7933	1	1	92.7933	14.4322
2	3	5	2	0	0	0	0	94.3641	94.3641	1	1	94.3641	18.0030
3	1	1	1	0	0	0	0	65.4405	65.4405	1	1	65.4405	-12.9206
3	1	1	2	0	0	0	0	60.3425	60.3425	1	1	60.3425	-18.0186
3	1	2	1	0	0	0	0	62.7776	62.7776	1	1	62.7776	-15.5835
3	1	2	2	0	0	0	0	62.1517	62.1517	1	1	62.1517	-16.2094
3	1	3	1	0	0	0	0	64.8964	64.8964	1	1	64.8964	-13.4647
3	1	3	2	0	0	0	0	65.1421	65.1421	1	1	65.1421	-13.2190
3	1	4	1	0	0	0	0	64.0719	64.0719	1	1	64.0719	-14.2892
3	1	4	2	0	0	0	0	53.0481	53.0481	1	1	53.0481	-25.3130
3	1	5	1	0	0	0	0	61.8933	61.8933	1	1	61.8933	-16.4678
3	1	5	2	0	0	0	0	63.3903	63.3903	1	1	63.3903	-14.9708
3	2	1	1	0	0	0	0	80.3392	80.3392	1	1	80.3392	1.9781
3	2	1	2	0	0	0	0	80.1546	80.1546	1	1	80.1546	1.7935
3	2	2	1	0	0	0	0	75.8177	75.8177	1	1	75.8177	-2.5434
3	2	2	2	0	0	0	0	78.0166	78.0166	1	1	78.0166	-0.3445
3	2	3	1	0	0	0	0	79.5740	79.5740	1	1	79.5740	1.2129
3	2	3	2	0	0	0	0	80.4396	80.4396	1	1	80.4396	2.0785
3	2	4	1	0	0	0	0	78.2652	78.2652	1	1	78.2652	-0.0959
3	2	4	2	0	0	0	0	69.8116	69.8116	1	1	69.8116	-8.5495
3	2	5	1	0	0	0	0	75.8254	75.8254	1	1	75.8254	-2.5357
3	2	5	2	0	0	0	0	78.2730	78.2730	1	1	78.2730	-0.0881
3	3	1	1	0	0	0	0	87.6387	87.6387	1	1	87.6387	9.2776
3	3	1	2	0	0	0	0	88.2538	88.2538	1	1	88.2538	9.8927
3	3	2	1	0	0	0	0	86.6533	86.6533	1	1	86.6533	8.2922
3	3	2	2	0	0	0	0	90.0899	90.0899	1	1	90.0899	11.7288
3	3	3	1	0	0	0	0	88.8228	88.8228	1	1	88.8228	10.4617
3	3	3	2	0	0	0	0	92.2767	92.2767	1	1	92.2767	13.9156
3	3	4	1	0	0	0	0	86.3420	86.3420	1	1	86.3420	7.9809
3	3	4	2	0	0	0	0	81.0335	81.0335	1	1	81.0335	2.6724
3	3	5	1	0	0	0	0	87.8542	87.8542	1	1	87.8542	9.4931
3	3	5	2	0	0	0	0	90.1183	90.1183	1	1	90.1183	11.7574
4	1	1	1	0	0	0	0	64.0799	64.0799	1	1	64.0799	-14.2812
4	1	1	2	0	0	0	0	61.0274	61.0274	1	1	61.0274	-17.3337
4	1	2	1	0	0	0	0	62.4524	62.4524	1	1	62.4524	-19.9087
4	1	2	2	0	0	0	0	62.0774	62.0774	1	1	62.0774	-16.2837
4	1	3	1	0	0	0	0	64.5274	64.5274	1	1	64.5274	-13.8337
4	1	3	2	0	0	0	0	65.0772	65.0772	1	1	65.0772	-13.2889
4	1	4	1	0	0	0	0	62.9946	62.9946	1	1	62.9946	-15.3665
4	1	4	2	0	0	0	0	56.7318	56.7318	1	1	56.7318	-21.6293

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
4	1	5	1	0	0	0	0	61.5089		61.5089	1	61.5089	-16.8522
4	1	5	2	0	0	0	0	63.0455		63.0455	1	63.0455	-15.3156
4	2	1	1	0	0	0	0	79.2933		79.2933	1	79.2933	0.9322
4	2	1	2	0	0	0	0	75.8524		75.8524	1	75.8524	-2.5087
4	2	2	1	0	0	0	0	74.5892		74.5892	1	74.5892	-3.7719
4	2	2	2	0	0	0	0	77.6277		77.6277	1	77.6277	-0.7334
4	2	3	1	0	0	0	0	78.6912		78.6912	1	78.6912	0.3301
4	2	3	2	0	0	0	0	79.8890		79.8890	1	79.8890	1.5279
4	2	4	1	0	0	0	0	77.0009		77.0009	1	77.0009	-1.3602
4	2	4	2	0	0	0	0	67.3879		67.3879	1	67.3879	-10.9732
4	2	5	1	0	0	0	0	76.0021		76.0021	1	76.0021	-2.3590
4	2	5	2	0	0	0	0	77.8752		77.8752	1	77.8752	-0.4859
4	3	1	1	0	0	0	0	87.1391		87.1391	1	87.1391	8.7780
4	3	1	2	0	0	0	0	87.9891		87.9891	1	87.9891	9.6280
4	3	2	1	0	0	0	0	86.1618		86.1618	1	86.1618	7.8007
4	3	2	2	0	0	0	0	90.2691		90.2691	1	90.2691	11.9080
4	3	3	1	0	0	0	0	86.2899		86.2899	1	86.2899	7.9288
4	3	3	2	0	0	0	0	92.1179		92.1179	1	92.1179	13.7568
4	3	4	1	0	0	0	0	85.2742		85.2742	1	85.2742	6.9131
4	3	4	2	0	0	0	0	80.5929		80.5929	1	80.5929	2.2318
4	3	5	1	0	0	0	0	87.7543		87.7543	1	87.7543	9.3932
4	3	5	2	0	0	0	0	89.4749		89.4749	1	89.4749	11.1138
24								16617.3660					

TABLE 8.2-9 TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SUMMARY OF ANALYSIS								TELPS N-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE			
SOURCE								DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	
A	B	C	D	E	F	G	H				
1	0	0	0	0	0	0	0	A	3	1016.0917	338.6839 *
0	1	0	0	0	0	0	0	B	2	14852.9072	7426.2536 *
0	0	1	0	0	0	0	0	C	4	207.7952	51.9488 *
0	0	0	1	0	0	0	0	D	1	7.7426	7.7426
1	1	0	0	0	0	0	0	AB	6	84.3291	14.0542
1	0	1	0	0	0	0	0	AC	12	95.1249	7.9271
1	0	0	1	0	0	0	0	AD	3	6.4081	2.1360
0	1	1	0	0	0	0	0	BC	8	15.3798	1.9217
0	1	0	1	0	0	0	0	BD	2	24.1328	12.0664
0	0	1	1	0	0	0	0	CD	4	144.0948	36.0137 *
1	1	1	0	0	0	0	0	ABC	24	25.0160	1.0423
1	1	0	1	0	0	0	0	ABD	6	14.8570	2.4762
1	0	1	1	0	0	0	0	ACD	12	89.9901	7.4992
0	1	1	1	0	0	0	0	BCD	8	11.6402	1.4550
1	1	1	1	0	0	0	0	ABCD	24	22.7666	0.9486
RESIDUAL								0	0.0222	0.00	

* 5% SIGNIFICANT FOR ERROR MS = 8.7080 W/80 df

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER

ANALYSIS OF VARIANCE								TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER			
A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	1	0	0	0	0	0.09730	0.09730	0.00947	1
1	1	1	2	0	0	0	0	0.08850	0.08850	0.00783	1
1	1	2	1	0	0	0	0	0.08967	0.08967	0.00804	1
1	1	2	2	0	0	0	0	0.08975	0.08975	0.00804	1
1	1	3	1	0	0	0	0	0.09030	0.09030	0.00815	1
1	1	3	2	0	0	0	0	0.09082	0.09082	0.00825	1
1	1	4	1	0	0	0	0	0.08538	0.08538	0.00729	1
1	1	4	2	0	0	0	0	0.08630	0.08630	0.00748	1
1	1	5	1	0	0	0	0	0.08816	0.08816	0.00777	1
1	1	5	2	0	0	0	0	0.09002	0.09002	0.00818	1
1	2	1	1	0	0	0	0	0.12267	0.12267	0.01505	1
1	2	1	2	0	0	0	0	0.12015	0.12015	0.01444	1
1	2	2	1	0	0	0	0	0.12016	0.12016	0.01444	1
1	2	2	2	0	0	0	0	0.12388	0.12388	0.01534	1
1	2	3	1	0	0	0	0	0.11700	0.11700	0.01369	1
1	2	3	2	0	0	0	0	0.11713	0.11713	0.01372	1
1	2	4	1	0	0	0	0	0.11196	0.11196	0.01254	1
1	2	4	2	0	0	0	0	0.12364	0.12364	0.01529	1
1	2	5	1	0	0	0	0	0.12394	0.12394	0.01536	1
1	2	5	2	0	0	0	0	0.12215	0.12215	0.01493	1
1	3	1	1	0	0	0	0	0.16460	0.16460	0.02109	1
1	3	1	2	0	0	0	0	0.15197	0.15197	0.01894	1
1	3	2	1	0	0	0	0	0.15852	0.15852	0.02513	1
1	3	2	2	0	0	0	0	0.16785	0.16785	0.02817	1
1	3	3	1	0	0	0	0	0.15232	0.15232	0.02320	1
1	3	3	2	0	0	0	0	0.14976	0.14976	0.02248	1
1	3	4	1	0	0	0	0	0.14119	0.14119	0.01993	1
1	3	4	2	0	0	0	0	0.13804	0.13804	0.01904	1
1	3	5	1	0	0	0	0	0.14332	0.14332	0.02054	1
1	3	5	2	0	0	0	0	0.14775	0.14775	0.02183	1
2	1	1	1	0	0	0	0	0.08297	0.08297	0.00688	1
2	1	1	2	0	0	0	0	0.08587	0.08587	0.00734	1
2	1	2	1	0	0	0	0	0.08545	0.08545	0.00730	1
2	1	2	2	0	0	0	0	0.08487	0.08487	0.00720	1
2	1	3	1	0	0	0	0	0.08859	0.08859	0.00785	1
2	1	3	2	0	0	0	0	0.08624	0.08624	0.00744	1
2	1	4	1	0	0	0	0	0.08401	0.08401	0.00706	1
2	1	4	2	0	0	0	0	0.08393	0.08393	0.00705	1
2	1	5	1	0	0	0	0	0.08368	0.08368	0.00700	1
2	1	5	2	0	0	0	0	0.08559	0.08559	0.00733	1
2	2	1	1	0	0	0	0	0.11577	0.11577	0.01340	1
2	2	1	2	0	0	0	0	0.11407	0.11407	0.01301	1
2	2	2	1	0	0	0	0	0.11119	0.11119	0.01236	1
2	2	2	2	0	0	0	0	0.11281	0.11281	0.01288	1
2	2	3	1	0	0	0	0	0.10906	0.10906	0.01184	1
2	2	3	2	0	0	0	0	0.11062	0.11062	0.01224	1
2	2	4	1	0	0	0	0	0.10901	0.10901	0.01188	1
2	2	4	2	0	0	0	0	0.10928	0.10928	0.01194	1
2	2	5	1	0	0	0	0	0.11330	0.11330	0.01284	1
2	2	5	2	0	0	0	0	0.11533	0.11533	0.01330	1
2	3	1	1	0	0	0	0	0.14696	0.14696	0.02160	1
2	3	1	2	0	0	0	0	0.14621	0.14621	0.02128	1
2	3	2	1	0	0	0	0	0.14213	0.14213	0.02020	1
2	3	2	2	0	0	0	0	0.14410	0.14410	0.02076	1
2	3	3	1	0	0	0	0	0.13747	0.13747	0.01890	1
2	3	3	2	0	0	0	0	0.14184	0.14184	0.02007	1
2	3	4	1	0	0	0	0	0.13801	0.13801	0.01908	1
2	3	4	2	0	0	0	0	0.13110	0.13110	0.01710	1

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

A	B	C	D	E	F	G	H	X1	X2	X3	H
2	3	5	1	0	0	0	0	0.13203	0.13203	0.01761	1
2	3	5	2	0	0	0	0	0.14066	0.14066	0.01979	1
3	1	1	1	0	0	0	0	0.08298	0.08298	0.00689	1
3	1	1	2	0	0	0	0	0.08965	0.08965	0.00804	1
3	1	2	1	0	0	0	0	0.08014	0.08014	0.00642	1
3	1	2	2	0	0	0	0	0.08360	0.08360	0.00699	1
3	1	3	1	0	0	0	0	0.08652	0.08652	0.00749	1
3	1	3	2	0	0	0	0	0.08322	0.08322	0.00693	1
3	1	4	1	0	0	0	0	0.07836	0.07836	0.00614	1
3	1	4	2	0	0	0	0	0.09165	0.09165	0.00840	1
3	1	5	1	0	0	0	0	0.07905	0.07905	0.00625	1
3	1	5	2	0	0	0	0	0.08200	0.08200	0.00672	1
3	2	1	1	0	0	0	0	0.11123	0.11123	0.01237	1
3	2	1	2	0	0	0	0	0.11278	0.11278	0.01272	1
3	2	2	1	0	0	0	0	0.10438	0.10438	0.01090	1
3	2	2	2	0	0	0	0	0.11223	0.11223	0.01260	1
3	2	3	1	0	0	0	0	0.10735	0.10735	0.01152	1
3	2	3	2	0	0	0	0	0.10824	0.10824	0.01172	1
3	2	4	1	0	0	0	0	0.10457	0.10457	0.01093	1
3	2	4	2	0	0	0	0	0.11065	0.11065	0.01224	1
3	2	5	1	0	0	0	0	0.10351	0.10351	0.01071	1
3	2	5	2	0	0	0	0	0.11131	0.11131	0.01239	1
3	3	1	1	0	0	0	0	0.13417	0.13417	0.01800	1
3	3	1	2	0	0	0	0	0.14434	0.14434	0.02083	1
3	3	2	1	0	0	0	0	0.13760	0.13760	0.01893	1
3	3	2	2	0	0	0	0	0.14240	0.14240	0.02028	1
3	3	3	1	0	0	0	0	0.13761	0.13761	0.01894	1
3	3	3	2	0	0	0	0	0.14074	0.14074	0.01981	1
3	3	4	1	0	0	0	0	0.14475	0.14475	0.02095	1
3	3	4	2	0	0	0	0	0.23032	0.23032	0.05305	1
3	3	5	1	0	0	0	0	0.13267	0.13267	0.01760	1
3	3	5	2	0	0	0	0	0.15183	0.15183	0.02305	1
4	1	1	1	0	0	0	0	0.07734	0.07734	0.00598	1
4	1	1	2	0	0	0	0	0.08867	0.08867	0.00786	1
4	1	2	1	0	0	0	0	0.08071	0.08071	0.00651	1
4	1	2	2	0	0	0	0	0.08575	0.08575	0.00735	1
4	1	3	1	0	0	0	0	0.08904	0.08904	0.00793	1
4	1	3	2	0	0	0	0	0.08589	0.08589	0.00738	1
4	1	4	1	0	0	0	0	0.07807	0.07807	0.00609	1
4	1	4	2	0	0	0	0	0.08497	0.08497	0.00722	1
4	1	5	1	0	0	0	0	0.07947	0.07947	0.00632	1
4	1	5	2	0	0	0	0	0.08294	0.08294	0.00688	1
4	2	1	1	0	0	0	0	0.11274	0.11274	0.01271	1
4	2	1	2	0	0	0	0	0.11410	0.11410	0.01302	1
4	2	2	1	0	0	0	0	0.10451	0.10451	0.01092	1
4	2	2	2	0	0	0	0	0.11369	0.11369	0.01293	1
4	2	3	1	0	0	0	0	0.10790	0.10790	0.01164	1
4	2	3	2	0	0	0	0	0.10471	0.10471	0.01096	1
4	2	4	1	0	0	0	0	0.10722	0.10722	0.01150	1
4	2	4	2	0	0	0	0	0.12590	0.12590	0.01585	1
4	2	5	1	0	0	0	0	0.10419	0.10419	0.01086	1
4	2	5	2	0	0	0	0	0.11103	0.11103	0.01233	1
4	3	1	1	0	0	0	0	0.13470	0.13470	0.01814	1
4	3	1	2	0	0	0	0	0.14949	0.14949	0.02235	1
4	3	2	1	0	0	0	0	0.13903	0.13903	0.01933	1
4	3	2	2	0	0	0	0	0.14611	0.14611	0.02135	1
4	3	3	1	0	0	0	0	0.13323	0.13323	0.01775	1
4	3	3	2	0	0	0	0	0.14430	0.14430	0.02082	1
4	3	4	1	0	0	0	0	0.14503	0.14503	0.02103	1
4	3	4	2	0	0	0	0	0.18734	0.18734	0.03818	1
4	3	5	1	0	0	0	0	0.13569	0.13569	0.01847	1
4	3	5	2	0	0	0	0	0.15558	0.15558	0.02421	1

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

ANALYSIS OF VARIANCE										TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER							
SOURCE										DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F	
BETWEEN										119		0.0901		0.0		0.0	
WITHIN										0		0.0		0.0			
TOTAL										119		0.0901					

SOURCE										SUM X1		CRUDE	SUM X2		FREQUENCY		MEAN X1		EFFECT X1		
A	B	C	D	E	F	G	H			SUM/SQ											
1	0	0	0	0	0	0	0	3.6142		3.6142		30		30		0.1205		0.0053			
2	0	0	0	0	0	0	0	3.3718		3.3718		30		30		0.1124		-0.0027			
3	0	0	0	0	0	0	0	3.4198		3.4198		30		30		0.1140		-0.0011			
4	0	0	0	0	0	0	0	3.4094		3.4094		30		30		0.1136		-0.0015			
3										0.0012											
0	1	0	0	0	0	0	0	3.4172		3.4172		40		40		0.0854		-0.0297			
0	2	0	0	0	0	0	0	4.5153		4.5153		40		40		0.1129		-0.0022			
0	3	0	0	0	0	0	0	5.8826		5.8826		40		40		0.1471		0.0319			
2										0.0763											
0	0	1	0	0	0	0	0	2.7890		2.7890		24		24		0.1162		0.0011			
0	0	2	0	0	0	0	0	2.7605		2.7605		24		24		0.1150		-0.0001			
0	0	3	0	0	0	0	0	2.7197		2.7197		24		24		0.1133		-0.0018			
0	0	4	0	0	0	0	0	2.8307		2.8307		24		24		0.1179		0.0028			
0	0	5	0	0	0	0	0	2.7152		2.7152		24		24		0.1131		-0.0020			
4										0.0004											
0	0	0	1	0	0	0	0	6.7399		6.7399		60		60		0.1123		-0.0028			
0	0	0	2	0	0	0	0	7.0753		7.0753		60		60		0.1179		0.0028			
1										0.0009											
1	1	0	0	0	0	0	0	0.8962		0.8962		10		10		0.0896		-0.0255			
1	2	0	0	0	0	0	0	1.2027		1.2027		10		10		0.1203		0.0051			
1	3	0	0	0	0	0	0	1.5153		1.5153		10		10		0.1515		0.0364			
2	1	0	0	0	0	0	0	0.8510		0.8510		10		10		0.0851		-0.0300			
2	2	0	0	0	0	0	0	1.1204		1.1204		10		10		0.1120		-0.0031			
2	3	0	0	0	0	0	0	1.4003		1.4003		10		10		0.1400		0.0249			
3	1	0	0	0	0	0	0	0.8372		0.8372		10		10		0.0837		-0.0314			
3	2	0	0	0	0	0	0	1.0862		1.0862		10		10		0.1086		-0.0065			
3	3	0	0	0	0	0	0	1.4964		1.4964		10		10		0.1496		0.0343			
4	1	0	0	0	0	0	0	0.8328		0.8328		10		10		0.0833		-0.0318			
4	2	0	0	0	0	0	0	1.1060		1.1060		10		10		0.1106		-0.0045			
4	3	0	0	0	0	0	0	1.4705		1.4705		10		10		0.1471		0.0319			
6										0.0781											
1	0	1	0	0	0	0	0	0.7452		0.7452		6		6		0.1242		0.0091			
1	0	2	0	0	0	0	0	0.7498		0.7498		6		6		0.1250		0.0096			
1	0	3	0	0	0	0	0	0.7173		0.7173		6		6		0.1198		0.0044			
1	0	4	0	0	0	0	0	0.6865		0.6865		6		6		0.1144		-0.0007			
1	0	5	0	0	0	0	0	0.7153		0.7153		6		6		0.1192		0.0041			
2	0	1	0	0	0	0	0	0.6918		0.6918		6		6		0.1153		0.0021			
2	0	2	0	0	0	0	0	0.6805		0.6805		6		6		0.1134		-0.0017			
2	0	3	0	0	0	0	0	0.6734		0.6734		6		6		0.1123		-0.0029			

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	0	1	0	0	0	0	0	0.6551		0.6553	6	0.1092	-0.0039
2	0	5	0	0	0	0	0	0.6706		0.6706	6	0.1118	-0.0034
3	0	1	0	0	0	0	0	0.6751		0.6751	6	0.1125	-0.0026
3	0	2	0	0	0	0	0	0.6603		0.6603	6	0.1101	-0.0051
3	0	3	0	0	0	0	0	0.6637		0.6637	6	0.1106	-0.0045
3	0	4	0	0	0	0	0	0.7603		0.7603	6	0.1267	0.0116
3	0	5	0	0	0	0	0	0.6604		0.6604	6	0.1101	-0.0051
4	0	1	0	0	0	0	0	0.6770		0.6770	6	0.1128	-0.0023
4	0	2	0	0	0	0	0	0.6698		0.6698	6	0.1116	-0.0035
4	0	3	0	0	0	0	0	0.6651		0.6651	6	0.1108	-0.0043
4	0	4	0	0	0	0	0	0.7285		0.7285	6	0.1214	0.0063
4	0	5	0	0	0	0	0	0.6689		0.6689	6	0.1113	-0.0036
12									0.0034				
1	0	0	1	0	0	0	0	1.8065		1.8065	15	0.1204	0.0033
1	0	0	2	0	0	0	0	1.8077		1.8077	15	0.1205	0.0054
2	0	0	1	0	0	0	0	1.6796		1.6796	15	0.1120	-0.0032
2	0	0	2	0	0	0	0	1.6921		1.6921	15	0.1128	-0.0023
3	0	0	1	0	0	0	0	1.6249		1.6249	15	0.1083	-0.0068
3	0	0	2	0	0	0	0	1.7950		1.7950	15	0.1197	0.0045
4	0	0	1	0	0	0	0	1.6289		1.6289	15	0.1088	-0.0065
4	0	0	2	0	0	0	0	1.7805		1.7805	15	0.1187	0.0036
3									0.0029				
0	1	1	0	0	0	0	0	0.6931		0.6931	8	0.0866	-0.0285
0	1	2	0	0	0	0	0	0.6799		0.6799	8	0.0890	-0.0301
0	1	3	0	0	0	0	0	0.7006		0.7006	8	0.0876	-0.0275
0	1	4	0	0	0	0	0	0.6727		0.6727	8	0.0841	-0.0310
0	1	5	0	0	0	0	0	0.6709		0.6709	8	0.0839	-0.0313
0	2	1	0	0	0	0	0	0.9235		0.9235	8	0.1154	0.0003
0	2	2	0	0	0	0	0	0.9028		0.9028	8	0.1129	-0.0023
0	2	3	0	0	0	0	0	0.8820		0.8820	8	0.1103	-0.0049
0	2	4	0	0	0	0	0	0.9022		0.9022	8	0.1128	-0.0023
0	2	5	0	0	0	0	0	0.9048		0.9048	8	0.1131	-0.0020
0	3	1	0	0	0	0	0	1.1724		1.1724	8	0.1466	0.0314
0	3	2	0	0	0	0	0	1.1777		1.1777	8	0.1472	0.0321
0	3	3	0	0	0	0	0	1.1371		1.1371	8	0.1421	0.0270
0	3	4	0	0	0	0	0	1.2558		1.2558	8	0.1570	0.0418
0	3	5	0	0	0	0	0	1.1395		1.1395	8	0.1424	0.0273
8									0.0776				
0	1	0	1	0	0	0	0	1.6872		1.6872	20	0.0844	-0.0308
0	1	0	2	0	0	0	0	1.7300		1.7300	20	0.0865	-0.0286
0	2	0	1	0	0	0	0	2.2217		2.2217	20	0.1111	-0.0040
0	2	0	2	0	0	0	0	2.2937		2.2937	20	0.1147	-0.0004
0	3	0	1	0	0	0	0	2.8310		2.8310	20	0.1416	0.0264
0	3	0	2	0	0	0	0	3.0516		3.0516	20	0.1526	0.0375
2									0.0777				
0	0	1	1	0	0	0	0	1.3834		1.3834	12	0.1153	0.0002
0	0	1	2	0	0	0	0	1.4056		1.4056	12	0.1171	0.0020
0	0	2	1	0	0	0	0	1.3535		1.3535	12	0.1128	-0.0023
0	0	2	2	0	0	0	0	1.4070		1.4070	12	0.1173	0.0021
0	0	3	1	0	0	0	0	1.3584		1.3584	12	0.1130	-0.0021
0	0	3	2	0	0	0	0	1.3633		1.3633	12	0.1134	-0.0015
0	0	4	1	0	0	0	0	1.3276		1.3276	12	0.1106	-0.0045
0	0	4	2	0	0	0	0	1.5031		1.5031	12	0.1253	0.0101
0	0	5	1	0	0	0	0	1.3190		1.3190	12	0.1099	-0.0052
0	0	5	2	0	0	0	0	1.3962		1.3962	12	0.1163	0.0012
4									0.0021				

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	1	1	0	0	0	0	0	0.1858		-0.1856	2	-0.0929	-0.0222
1	1	2	0	0	0	0	0	0.1794		0.1794	2	0.0897	-0.0254
1	1	3	0	0	0	0	0	0.1811		0.1811	2	0.0906	-0.0246
1	1	4	0	0	0	0	0	0.1717		0.1717	2	0.0858	-0.0295
1	1	5	0	0	0	0	0	0.1782		0.1782	2	0.0891	-0.0260
1	2	1	0	0	0	0	0	0.2428		0.2428	2	0.1214	0.0063
1	2	2	0	0	0	0	0	0.2440		0.2440	2	0.1220	0.0069
1	2	3	0	0	0	0	0	0.2341		0.2341	2	0.1171	0.0019
1	2	4	0	0	0	0	0	0.2356		0.2356	2	0.1178	0.0027
1	2	5	0	0	0	0	0	0.2461		0.2461	2	0.1230	0.0079
1	3	1	0	0	0	0	0	0.3166		0.3166	2	0.1583	0.0432
1	3	2	0	0	0	0	0	0.3264		0.3264	2	0.1632	0.0481
1	3	3	0	0	0	0	0	0.3021		0.3021	2	0.1510	0.0359
1	3	4	0	0	0	0	0	0.2792		0.2792	2	0.1396	0.0245
1	3	5	0	0	0	0	0	0.2911		0.2911	2	0.1455	0.0304
2	1	1	0	0	0	0	0	0.1688		0.1688	2	0.0843	-0.0308
2	1	2	0	0	0	0	0	0.1703		0.1703	2	0.0852	-0.0300
2	1	3	0	0	0	0	0	0.1748		0.1748	2	0.0874	-0.0277
2	1	4	0	0	0	0	0	0.1679		0.1679	2	0.0840	-0.0312
2	1	5	0	0	0	0	0	0.1693		0.1693	2	0.0846	-0.0305
2	2	1	0	0	0	0	0	0.2298		0.2298	2	0.1149	-0.0002
2	2	2	0	0	0	0	0	0.2240		0.2240	2	0.1120	-0.0031
2	2	3	0	0	0	0	0	0.2197		0.2197	2	0.1098	-0.0053
2	2	4	0	0	0	0	0	0.2183		0.2183	2	0.1091	-0.0060
2	2	5	0	0	0	0	0	0.2286		0.2286	2	0.1143	-0.0008
2	3	1	0	0	0	0	0	0.2932		0.2932	2	0.1466	0.0315
2	3	2	0	0	0	0	0	0.2862		0.2862	2	0.1431	0.0280
2	3	3	0	0	0	0	0	0.2791		0.2791	2	0.1396	0.0244
2	3	4	0	0	0	0	0	0.2691		0.2691	2	0.1346	0.0194
2	3	5	0	0	0	0	0	0.2727		0.2727	2	0.1363	0.0212
3	1	1	0	0	0	0	0	0.1726		0.1726	2	0.0863	-0.0288
3	1	2	0	0	0	0	0	0.1637		0.1637	2	0.0819	-0.0333
3	1	3	0	0	0	0	0	0.1697		0.1697	2	0.0849	-0.0303
3	1	4	0	0	0	0	0	0.1700		0.1700	2	0.0850	-0.0301
3	1	5	0	0	0	0	0	0.1610		0.1610	2	0.0805	-0.0346
3	2	1	0	0	0	0	0	0.2240		0.2240	2	0.1120	-0.0031
3	2	2	0	0	0	0	0	0.2166		0.2166	2	0.1083	-0.0068
3	2	3	0	0	0	0	0	0.2156		0.2156	2	0.1078	-0.0073
3	2	4	0	0	0	0	0	0.2152		0.2152	2	0.1076	-0.0075
3	2	5	0	0	0	0	0	0.2148		0.2148	2	0.1074	-0.0077
3	3	1	0	0	0	0	0	0.2785		0.2785	2	0.1393	0.0241
3	3	2	0	0	0	0	0	0.2800		0.2800	2	0.1400	0.0249
3	3	3	0	0	0	0	0	0.2783		0.2783	2	0.1392	0.0240
3	3	4	0	0	0	0	0	0.3751		0.3751	2	0.1875	0.0724
3	3	5	0	0	0	0	0	0.2845		0.2845	2	0.1422	0.0271
4	1	1	0	0	0	0	0	0.1680		0.1680	2	0.0840	-0.0321
4	1	2	0	0	0	0	0	0.1665		0.1665	2	0.0832	-0.0319
4	1	3	0	0	0	0	0	0.1749		0.1749	2	0.0875	-0.0277
4	1	4	0	0	0	0	0	0.1630		0.1630	2	0.0815	-0.0336
4	1	5	0	0	0	0	0	0.1624		0.1624	2	0.0812	-0.0339
4	2	1	0	0	0	0	0	0.2268		0.2268	2	0.1134	-0.0017
4	2	2	0	0	0	0	0	0.2182		0.2182	2	0.1091	-0.0060
4	2	3	0	0	0	0	0	0.2126		0.2126	2	0.1063	-0.0088
4	2	4	0	0	0	0	0	0.2331		0.2331	2	0.1166	0.0014
4	2	5	0	0	0	0	0	0.2152		0.2152	2	0.1076	-0.0075
4	3	1	0	0	0	0	0	0.2842		0.2842	2	0.1421	0.0270
4	3	2	0	0	0	0	0	0.2851		0.2851	2	0.1426	0.0274
4	3	3	0	0	0	0	0	0.2775		0.2775	2	0.1388	0.0236
4	3	4	0	0	0	0	0	0.3324		0.3324	2	0.1662	0.0511
4	3	5	0	0	0	0	0	0.2913		0.2913	2	0.1456	0.0305
24								0.0840					
1	1	0	1	0	0	0	0	0.4908		0.4908	8	0.0902	-0.0290
1	1	0	2	0	0	0	0	0.4454		0.4454	8	0.0891	-0.0260
1	2	0	1	0	0	0	0	0.5957		0.5957	8	0.1191	0.0040

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/NO	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	2	0	2	0	0	0	0	0.4524		0.4524	3	0.1214	0.0063
1	3	0	1	0	0	0	0	0.7599		0.7599	5	0.1520	0.0369
1	3	0	2	0	0	0	0	0.7554		0.7554	5	0.1511	0.0359
2	1	0	1	0	0	0	0	0.4247		0.4247	5	0.0849	-0.0302
2	1	0	2	0	0	0	0	0.4263		0.4263	5	0.0853	-0.0299
2	2	0	1	0	0	0	0	0.5583		0.5583	5	0.1117	-0.0035
2	2	0	2	0	0	0	0	0.5621		0.5621	5	0.1124	-0.0027
2	3	0	1	0	0	0	0	0.6966		0.6966	5	0.1393	0.0242
2	3	0	2	0	0	0	0	0.7037		0.7037	5	0.1407	0.0256
3	1	0	1	0	0	0	0	0.4070		0.4070	5	0.0814	-0.0337
3	1	0	2	0	0	0	0	0.4301		0.4301	5	0.0860	-0.0291
3	2	0	1	0	0	0	0	0.5310		0.5310	5	0.1062	-0.0089
3	2	0	2	0	0	0	0	0.5552		0.5552	5	0.1110	-0.0041
3	3	0	1	0	0	0	0	0.6868		0.6868	5	0.1374	0.0222
3	3	0	2	0	0	0	0	0.8096		0.8096	5	0.1619	0.0468
4	1	0	1	0	0	0	0	0.4046		0.4046	5	0.0809	-0.0342
4	1	0	2	0	0	0	0	0.4282		0.4282	5	0.0856	-0.0295
4	2	0	1	0	0	0	0	0.5366		0.5366	5	0.1073	-0.0078
4	2	0	2	0	0	0	0	0.5694		0.5694	5	0.1139	-0.0012
4	3	0	1	0	0	0	0	0.6877		0.6877	5	0.1375	0.0224
4	3	0	2	0	0	0	0	0.7828		0.7828	5	0.1566	0.0414
6									0.0808				
1	0	1	1	0	0	0	0	0.3846		0.3846	3	0.1282	0.0131
1	0	1	2	0	0	0	0	0.3606		0.3606	3	0.1202	0.0051
1	0	2	1	0	0	0	0	0.3683		0.3683	3	0.1228	0.0077
1	0	2	2	0	0	0	0	0.3815		0.3815	3	0.1272	0.0120
1	0	3	1	0	0	0	0	0.3596		0.3596	3	0.1199	0.0047
1	0	3	2	0	0	0	0	0.3577		0.3577	3	0.1192	0.0041
1	0	4	1	0	0	0	0	0.3385		0.3385	3	0.1128	-0.0023
1	0	4	2	0	0	0	0	0.3480		0.3480	3	0.1160	0.0009
1	0	5	1	0	0	0	0	0.3554		0.3554	3	0.1185	0.0033
1	0	5	2	0	0	0	0	0.3599		0.3599	3	0.1200	0.0048
2	0	1	1	0	0	0	0	0.3457		0.3457	3	0.1152	0.0001
2	0	1	2	0	0	0	0	0.3459		0.3459	3	0.1153	0.0002
2	0	2	1	0	0	0	0	0.3388		0.3388	3	0.1129	-0.0022
2	0	2	2	0	0	0	0	0.3418		0.3418	3	0.1139	-0.0012
2	0	3	1	0	0	0	0	0.3351		0.3351	3	0.1117	-0.0034
2	0	3	2	0	0	0	0	0.3385		0.3385	3	0.1128	-0.0023
2	0	4	1	0	0	0	0	0.3310		0.3310	3	0.1103	-0.0048
2	0	4	2	0	0	0	0	0.3243		0.3243	3	0.1081	-0.0070
2	0	5	1	0	0	0	0	0.3290		0.3290	3	0.1097	-0.0055
2	0	5	2	0	0	0	0	0.3416		0.3416	3	0.1139	-0.0013
3	0	1	1	0	0	0	0	0.3284		0.3284	3	0.1095	-0.0057
3	0	1	2	0	0	0	0	0.3468		0.3468	3	0.1156	0.0005
3	0	2	1	0	0	0	0	0.3221		0.3221	3	0.1074	-0.0078
3	0	2	2	0	0	0	0	0.3382		0.3382	3	0.1127	-0.0024
3	0	3	1	0	0	0	0	0.3315		0.3315	3	0.1105	-0.0048
3	0	3	2	0	0	0	0	0.3322		0.3322	3	0.1107	-0.0044
3	0	4	1	0	0	0	0	0.3277		0.3277	3	0.1092	-0.0059
3	0	4	2	0	0	0	0	0.3326		0.3326	3	0.1142	0.0291
3	0	5	1	0	0	0	0	0.3152		0.3152	3	0.1051	-0.0100
3	0	5	2	0	0	0	0	0.3451		0.3451	3	0.1150	-0.0001
4	0	1	1	0	0	0	0	0.3248		0.3248	3	0.1083	-0.0069
4	0	1	2	0	0	0	0	0.3523		0.3523	3	0.1174	0.0023
4	0	2	1	0	0	0	0	0.3242		0.3242	3	0.1081	-0.0070
4	0	2	2	0	0	0	0	0.3455		0.3455	3	0.1152	0.0001
4	0	3	1	0	0	0	0	0.3302		0.3302	3	0.1101	-0.0051
4	0	3	2	0	0	0	0	0.3349		0.3349	3	0.1116	-0.0035
4	0	4	1	0	0	0	0	0.3303		0.3303	3	0.1101	-0.0050
4	0	4	2	0	0	0	0	0.3982		0.3982	3	0.1327	0.0176
4	0	5	1	0	0	0	0	0.3193		0.3193	3	0.1064	-0.0087
4	0	5	2	0	0	0	0	0.3495		0.3495	3	0.1185	0.0014
12									0.0068				

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/BQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
0	1	1	1	0	0	0	0	0.3406		0.3406	4	0.0851	-0.0300
0	1	1	2	0	0	0	0	0.3525		0.3525	4	0.0881	-0.0270
0	1	2	1	0	0	0	0	0.3360		0.3360	4	0.0840	-0.0311
0	1	2	2	0	0	0	0	0.3440		0.3440	4	0.0860	-0.0291
0	1	3	1	0	0	0	0	0.3544		0.3544	4	0.0886	-0.0263
0	1	3	2	0	0	0	0	0.3462		0.3462	4	0.0865	-0.0286
0	1	4	1	0	0	0	0	0.3258		0.3258	4	0.0815	-0.0337
0	1	4	2	0	0	0	0	0.3468		0.3468	4	0.0867	-0.0284
0	1	5	1	0	0	0	0	0.3304		0.3304	4	0.0826	-0.0323
0	1	5	2	0	0	0	0	0.3405		0.3405	4	0.0851	-0.0300
0	2	1	1	0	0	0	0	0.4624		0.4624	4	0.1156	0.0005
0	2	1	2	0	0	0	0	0.4611		0.4611	4	0.1153	0.0001
0	2	2	1	0	0	0	0	0.4402		0.4402	4	0.1101	-0.0051
0	2	2	2	0	0	0	0	0.4626		0.4626	4	0.1156	0.0005
0	2	3	1	0	0	0	0	0.4413		0.4413	4	0.1108	-0.0048
0	2	3	2	0	0	0	0	0.4407		0.4407	4	0.1102	-0.0050
0	2	4	1	0	0	0	0	0.4328		0.4328	4	0.1082	-0.0069
0	2	4	2	0	0	0	0	0.4695		0.4695	4	0.1174	0.0022
0	2	5	1	0	0	0	0	0.4449		0.4449	4	0.1112	-0.0039
0	2	5	2	0	0	0	0	0.4598		0.4598	4	0.1150	-0.0002
0	3	1	1	0	0	0	0	0.5804		0.5804	4	0.1491	0.0300
0	3	1	2	0	0	0	0	0.5920		0.5920	4	0.1480	0.0329
0	3	2	1	0	0	0	0	0.5773		0.5773	4	0.1443	0.0292
0	3	2	2	0	0	0	0	0.6005		0.6005	4	0.1501	0.0350
0	3	3	1	0	0	0	0	0.5606		0.5606	4	0.1402	0.0250
0	3	3	2	0	0	0	0	0.5765		0.5765	4	0.1441	0.0290
0	3	4	1	0	0	0	0	0.5890		0.5890	4	0.1483	0.0271
0	3	4	2	0	0	0	0	0.6868		0.6868	4	0.1717	0.0566
0	3	5	1	0	0	0	0	0.5437		0.5437	4	0.1389	0.0308
0	3	5	2	0	0	0	0	0.5958		0.5958	4	0.1490	0.0338
8								0.0802					
1	1	1	1	0	0	0	0	0.0973		0.0973	1	0.0973	-0.0178
1	1	1	2	0	0	0	0	0.0885		0.0885	1	0.0885	-0.0266
1	1	2	1	0	0	0	0	0.0897		0.0897	1	0.0897	-0.0255
1	1	2	2	0	0	0	0	0.0897		0.0897	1	0.0897	-0.0254
1	1	3	1	0	0	0	0	0.0903		0.0903	1	0.0903	-0.0248
1	1	3	2	0	0	0	0	0.0908		0.0908	1	0.0908	-0.0243
1	1	4	1	0	0	0	0	0.0854		0.0854	1	0.0854	-0.0297
1	1	4	2	0	0	0	0	0.0863		0.0863	1	0.0863	-0.0288
1	1	5	1	0	0	0	0	0.0882		0.0882	1	0.0882	-0.0270
1	1	5	2	0	0	0	0	0.0900		0.0900	1	0.0900	-0.0251
1	2	1	1	0	0	0	0	0.1227		0.1227	1	0.1227	0.0075
1	2	1	2	0	0	0	0	0.1201		0.1201	1	0.1201	0.0090
1	2	2	1	0	0	0	0	0.1202		0.1202	1	0.1202	0.0090
1	2	2	2	0	0	0	0	0.1239		0.1239	1	0.1239	0.0087
1	2	3	1	0	0	0	0	0.1170		0.1170	1	0.1170	0.0019
1	2	3	2	0	0	0	0	0.1171		0.1171	1	0.1171	0.0020
1	2	4	1	0	0	0	0	0.1120		0.1120	1	0.1120	-0.0032
1	2	4	2	0	0	0	0	0.1236		0.1236	1	0.1236	0.0088
1	2	5	1	0	0	0	0	0.1239		0.1239	1	0.1239	0.0088
1	2	5	2	0	0	0	0	0.1221		0.1221	1	0.1221	0.0070
1	3	1	1	0	0	0	0	0.1646		0.1646	1	0.1646	0.0495
1	3	1	2	0	0	0	0	0.1520		0.1520	1	0.1520	0.0368
1	3	2	1	0	0	0	0	0.1585		0.1585	1	0.1585	0.0434
1	3	2	2	0	0	0	0	0.1678		0.1678	1	0.1678	0.0527
1	3	3	1	0	0	0	0	0.1523		0.1523	1	0.1523	0.0372
1	3	3	2	0	0	0	0	0.1498		0.1498	1	0.1498	0.0346
1	3	4	1	0	0	0	0	0.1412		0.1412	1	0.1412	0.0261
1	3	4	2	0	0	0	0	0.1380		0.1380	1	0.1380	0.0229
1	3	5	1	0	0	0	0	0.1433		0.1433	1	0.1433	0.0282
1	3	5	2	0	0	0	0	0.1477		0.1477	1	0.1477	0.0328
2	1	1	1	0	0	0	0	0.0830		0.0830	1	0.0830	-0.0211
2	1	1	2	0	0	0	0	0.0857		0.0857	1	0.0857	-0.0238

TABLE 8 2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/SC	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	1	2	1	0	0	0	0	0.0854		0.0854	1	0.0854	-0.0297
2	1	2	2	0	0	0	0	0.0849		0.0849	1	0.0849	-0.0303
2	1	3	1	0	0	0	0	0.0886		0.0886	1	0.0886	-0.0265
2	1	3	2	0	0	0	0	0.0862		0.0862	1	0.0862	-0.0289
2	1	4	1	0	0	0	0	0.0840		0.0840	1	0.0840	-0.0311
2	1	4	2	0	0	0	0	0.0839		0.0839	1	0.0839	-0.0312
2	1	5	1	0	0	0	0	0.0837		0.0837	1	0.0837	-0.0314
2	1	5	2	0	0	0	0	0.0856		0.0856	1	0.0856	-0.0295
2	2	1	1	0	0	0	0	0.1158		0.1158	1	0.1158	0.0006
2	2	1	2	0	0	0	0	0.1141		0.1141	1	0.1141	-0.0011
2	2	2	1	0	0	0	0	0.1112		0.1112	1	0.1112	-0.0039
2	2	2	2	0	0	0	0	0.1128		0.1128	1	0.1128	-0.0023
2	2	3	1	0	0	0	0	0.1091		0.1091	1	0.1091	-0.0061
2	2	3	2	0	0	0	0	0.1106		0.1106	1	0.1106	-0.0045
2	2	4	1	0	0	0	0	0.1090		0.1090	1	0.1090	-0.0061
2	2	4	2	0	0	0	0	0.1093		0.1093	1	0.1093	-0.0058
2	2	5	1	0	0	0	0	0.1133		0.1133	1	0.1133	-0.0018
2	2	5	2	0	0	0	0	0.1153		0.1153	1	0.1153	0.0002
2	3	1	1	0	0	0	0	0.1470		0.1470	1	0.1470	0.0318
2	3	1	2	0	0	0	0	0.1462		0.1462	1	0.1462	0.0311
2	3	2	1	0	0	0	0	0.1421		0.1421	1	0.1421	0.0270
2	3	2	2	0	0	0	0	0.1441		0.1441	1	0.1441	0.0290
2	3	3	1	0	0	0	0	0.1375		0.1375	1	0.1375	0.0223
2	3	3	2	0	0	0	0	0.1417		0.1417	1	0.1417	0.0265
2	3	4	1	0	0	0	0	0.1380		0.1380	1	0.1380	0.0229
2	3	4	2	0	0	0	0	0.1311		0.1311	1	0.1311	0.0160
2	3	5	1	0	0	0	0	0.1320		0.1320	1	0.1320	0.0169
2	3	5	2	0	0	0	0	0.1407		0.1407	1	0.1407	0.0255
3	1	1	1	0	0	0	0	0.0830		0.0830	1	0.0830	-0.0321
3	1	1	2	0	0	0	0	0.0896		0.0896	1	0.0896	-0.0255
3	1	2	1	0	0	0	0	0.0801		0.0801	1	0.0801	-0.0350
3	1	2	2	0	0	0	0	0.0836		0.0836	1	0.0836	-0.0315
3	1	3	1	0	0	0	0	0.0865		0.0865	1	0.0865	-0.0286
3	1	3	2	0	0	0	0	0.0832		0.0832	1	0.0832	-0.0319
3	1	4	1	0	0	0	0	0.0784		0.0784	1	0.0784	-0.0368
3	1	4	2	0	0	0	0	0.0916		0.0916	1	0.0916	-0.0235
3	1	5	1	0	0	0	0	0.0790		0.0790	1	0.0790	-0.0361
3	1	5	2	0	0	0	0	0.0820		0.0820	1	0.0820	-0.0331
3	2	1	1	0	0	0	0	0.1112		0.1112	1	0.1112	-0.0039
3	2	1	2	0	0	0	0	0.1128		0.1128	1	0.1128	-0.0023
3	2	2	1	0	0	0	0	0.1044		0.1044	1	0.1044	-0.0107
3	2	2	2	0	0	0	0	0.1122		0.1122	1	0.1122	-0.0029
3	2	3	1	0	0	0	0	0.1073		0.1073	1	0.1073	-0.0078
3	2	3	2	0	0	0	0	0.1082		0.1082	1	0.1082	-0.0069
3	2	4	1	0	0	0	0	0.1046		0.1046	1	0.1046	-0.0106
3	2	4	2	0	0	0	0	0.1106		0.1106	1	0.1106	-0.0045
3	2	5	1	0	0	0	0	0.1035		0.1035	1	0.1035	-0.0116
3	2	5	2	0	0	0	0	0.1113		0.1113	1	0.1113	-0.0038
3	3	1	1	0	0	0	0	0.1342		0.1342	1	0.1342	0.0190
3	3	1	2	0	0	0	0	0.1443		0.1443	1	0.1443	0.0292
3	3	2	1	0	0	0	0	0.1376		0.1376	1	0.1376	0.0225
3	3	2	2	0	0	0	0	0.1424		0.1424	1	0.1424	0.0273
3	3	3	1	0	0	0	0	0.1376		0.1376	1	0.1376	0.0225
3	3	3	2	0	0	0	0	0.1407		0.1407	1	0.1407	0.0256
3	3	4	1	0	0	0	0	0.1447		0.1447	1	0.1447	0.0296
3	3	4	2	0	0	0	0	0.2303		0.2303	1	0.2303	0.1152
3	3	5	1	0	0	0	0	0.1327		0.1327	1	0.1327	0.0175
3	3	5	2	0	0	0	0	0.1518		0.1518	1	0.1518	0.0867
4	1	1	1	0	0	0	0	0.0773		0.0773	1	0.0773	-0.0378
4	1	1	2	0	0	0	0	0.0887		0.0887	1	0.0887	-0.0265
4	1	2	1	0	0	0	0	0.0807		0.0807	1	0.0807	-0.0344
4	1	2	2	0	0	0	0	0.0857		0.0857	1	0.0857	-0.0294
4	1	3	1	0	0	0	0	0.0890		0.0890	1	0.0890	-0.0261
4	1	3	2	0	0	0	0	0.0899		0.0899	1	0.0899	-0.0252
4	1	4	1	0	0	0	0	0.0781		0.0781	1	0.0781	-0.0371
4	1	4	2	0	0	0	0	0.0850		0.0850	1	0.0850	-0.0282

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
4	1	5	1	0	0	0	0	0.0795		0.0795	1	0.0795	-0.0357
4	1	5	2	0	0	0	0	0.0829		0.0829	1	0.0829	-0.0322
4	2	1	1	0	0	0	0	0.1127		0.1127	1	0.1127	-0.0024
4	2	1	2	0	0	0	0	0.1141		0.1141	1	0.1141	-0.0010
4	2	2	1	0	0	0	0	0.1045		0.1045	1	0.1045	-0.0106
4	2	2	2	0	0	0	0	0.1137		0.1137	1	0.1137	-0.0014
4	2	3	1	0	0	0	0	0.1079		0.1079	1	0.1079	-0.0072
4	2	3	2	0	0	0	0	0.1047		0.1047	1	0.1047	-0.0104
4	2	4	1	0	0	0	0	0.1072		0.1072	1	0.1072	-0.0079
4	2	4	2	0	0	0	0	0.1259		0.1259	1	0.1259	0.0108
4	2	5	1	0	0	0	0	0.1042		0.1042	1	0.1042	-0.0109
4	2	5	2	0	0	0	0	0.1110		0.1110	1	0.1110	-0.0041
4	3	1	1	0	0	0	0	0.1347		0.1347	1	0.1347	0.0196
4	3	1	2	0	0	0	0	0.1495		0.1495	1	0.1495	0.0344
4	3	2	1	0	0	0	0	0.1390		0.1390	1	0.1390	0.0239
4	3	2	2	0	0	0	0	0.1461		0.1461	1	0.1461	0.0310
4	3	3	1	0	0	0	0	0.1332		0.1332	1	0.1332	0.0181
4	3	3	2	0	0	0	0	0.1443		0.1443	1	0.1443	0.0292
4	3	4	1	0	0	0	0	0.1450		0.1450	1	0.1450	0.0299
4	3	4	2	0	0	0	0	0.1874		0.1874	1	0.1874	0.0722
4	3	5	1	0	0	0	0	0.1357		0.1357	1	0.1357	0.0206
4	3	5	2	0	0	0	0	0.1556		0.1556	1	0.1556	0.0405
24									0.0901				

TABLE 8.2-10. TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SUMMARY OF ANALYSIS								TELPS N-LEG PERFORMANCE ANALYSIS FOR POWER							
SOURCE								DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F	
A	B	C	D	E	F	G	H								
1	0	0	0	0	0	0	0	A	3	0.0012	0.000400	*			
0	1	0	0	0	0	0	0	B	2	0.0763	0.038150	*			
0	0	1	0	0	0	0	0	C	4	0.0004	0.000100				
0	0	0	1	0	0	0	0	D	1	0.0009	0.000900	*			
1	1	0	0	0	0	0	0	AB	6	0.0006	0.000100				
1	0	1	0	0	0	0	0	AC	12	0.0019	0.000158	*			
1	0	0	1	0	0	0	0	AD	3	0.0008	0.000267	*			
0	1	1	0	0	0	0	0	BC	8	0.0010	0.000125	*			
0	1	0	1	0	0	0	0	BD	2	0.0005	0.000250	*			
0	0	1	1	0	0	0	0	CD	4	0.0007	0.000175	*			
1	1	1	0	0	0	0	0	ABC	24	0.0027	0.000112		3.00*		1.40
1	1	0	1	0	0	0	0	ABD	6	0.0005	0.000083		2.22*		1.04
1	0	1	1	0	0	0	0	ACD	12	0.0009	0.000075		2.701*		< 1
0	1	1	1	0	0	0	0	BCD	8	0.0004	0.000050		1.34		< 1
1	1	1	1	0	0	0	0	ABCD	24	0.0013	0.000054		1.45		< 1
RESIDUAL									0	0.0000	0.0				

* 5% SIGNIFICANT BASED ON ERROR MS = 3.733×10^{-5} W/60 df

** 5% SIGNIFICANT BASED ON ERROR MS = 8×10^{-5} W/74 df

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	1	0	0	0	0	11.60180	11.60180	134.60176	1
1	1	1	2	0	0	0	0	10.96990	10.96990	120.33871	1
1	1	2	1	0	0	0	0	13.03280	13.03280	169.85388	1
1	1	2	2	0	0	0	0	12.42870	12.42870	154.47258	1
1	1	3	1	0	0	0	0	11.69540	11.69540	136.78238	1
1	1	3	2	0	0	0	0	12.84420	12.84420	164.97347	1
1	1	4	1	0	0	0	0	12.31100	12.31100	151.56072	1
1	1	4	2	0	0	0	0	12.21000	12.21000	149.08410	1
1	1	5	1	0	0	0	0	12.04290	12.04290	145.03144	1
1	1	5	2	0	0	0	0	12.41310	12.41310	154.08505	1
1	2	1	1	0	0	0	0	9.50000	9.50000	90.25000	1
1	2	1	2	0	0	0	0	12.93710	12.93710	167.36856	1
1	2	2	1	0	0	0	0	14.10950	14.10950	199.07799	1
1	2	2	2	0	0	0	0	13.66600	13.66600	186.75956	1
1	2	3	1	0	0	0	0	13.45500	13.45500	181.03702	1
1	2	3	2	0	0	0	0	13.21010	13.21010	174.50674	1
1	2	4	1	0	0	0	0	12.87110	12.87110	165.66522	1
1	2	4	2	0	0	0	0	13.09230	13.09230	171.40832	1
1	2	5	1	0	0	0	0	12.82500	12.82500	164.48062	1
1	2	5	2	0	0	0	0	13.82500	13.82500	191.13062	1
1	3	1	1	0	0	0	0	13.30540	13.30540	177.03367	1
1	3	1	2	0	0	0	0	14.00720	14.00720	196.20165	1
1	3	2	1	0	0	0	0	15.04160	15.04160	226.24973	1
1	3	2	2	0	0	0	0	14.37000	14.37000	206.49690	1
1	3	3	1	0	0	0	0	14.65000	14.65000	214.62250	1
1	3	3	2	0	0	0	0	14.46970	14.46970	209.37222	1
1	3	4	1	0	0	0	0	13.90930	13.90930	193.46863	1
1	3	4	2	0	0	0	0	14.28750	14.28750	204.13266	1
1	3	5	1	0	0	0	0	14.41500	14.41500	207.79222	1
1	3	5	2	0	0	0	0	14.12360	14.12360	199.47608	1
2	1	1	1	0	0	0	0	8.04500	8.04500	64.72202	1
2	1	1	2	0	0	0	0	8.00940	8.00940	64.15049	1
2	1	2	1	0	0	0	0	10.76690	10.76690	115.92614	1
2	1	2	2	0	0	0	0	10.74830	10.74830	115.52595	1
2	1	3	1	0	0	0	0	8.87270	8.87270	78.72481	1
2	1	3	2	0	0	0	0	10.39140	10.39140	107.98119	1
2	1	4	1	0	0	0	0	9.93270	9.93270	98.65853	1
2	1	4	2	0	0	0	0	9.48550	9.48550	89.97471	1
2	1	5	1	0	0	0	0	8.98110	8.98110	80.66016	1
2	1	5	2	0	0	0	0	8.21200	8.21200	67.43694	1
2	2	1	1	0	0	0	0	9.57890	9.57890	91.75533	1
2	2	1	2	0	0	0	0	10.33820	10.33820	106.87838	1
2	2	2	1	0	0	0	0	11.73660	11.73660	137.74778	1
2	2	2	2	0	0	0	0	10.50100	10.50100	110.27100	1
2	2	3	1	0	0	0	0	11.14500	11.14500	124.21102	1
2	2	3	2	0	0	0	0	9.60510	9.60510	92.25795	1
2	2	4	1	0	0	0	0	7.44150	7.44150	55.37592	1
2	2	4	2	0	0	0	0	8.85730	8.85730	78.45176	1
2	2	5	1	0	0	0	0	7.54140	7.54140	56.87271	1
2	2	5	2	0	0	0	0	10.11130	10.11130	102.23839	1
2	3	1	1	0	0	0	0	11.19640	11.19640	125.35937	1
2	3	1	2	0	0	0	0	12.06910	12.06910	145.66317	1
2	3	2	1	0	0	0	0	12.87460	12.87460	165.75533	1
2	3	2	2	0	0	0	0	13.36330	13.36330	178.57779	1
2	3	3	1	0	0	0	0	10.80670	10.80670	116.78476	1
2	3	3	2	0	0	0	0	11.71780	11.71780	137.30684	1
2	3	4	1	0	0	0	0	11.67630	11.67630	136.33598	1
2	3	4	2	0	0	0	0	12.30000	12.30000	151.29000	1

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
2	3	5	1	0	0	0	0	11.62560	11.62560	135.15458	1
2	3	5	2	0	0	0	0	11.00540	11.00540	121.11883	1
3	1	1	1	0	0	0	0	8.15060	8.15060	66.43228	1
3	1	1	2	0	0	0	0	8.83210	8.83210	78.00599	1
3	1	2	1	0	0	0	0	9.45310	9.45310	89.36110	1
3	1	2	2	0	0	0	0	9.33000	9.33000	87.04890	1
3	1	3	1	0	0	0	0	7.80500	7.80500	60.91802	1
3	1	3	2	0	0	0	0	8.25780	8.25780	68.19126	1
3	1	4	1	0	0	0	0	9.74580	9.74580	94.98062	1
3	1	4	2	0	0	0	0	8.56500	8.56500	73.35922	1
3	1	5	1	0	0	0	0	8.37920	8.37920	70.21099	1
3	1	5	2	0	0	0	0	8.21090	8.21090	67.41888	1
3	2	1	1	0	0	0	0	10.70480	10.70480	114.59274	1
3	2	1	2	0	0	0	0	9.37150	9.37150	87.82501	1
3	2	2	1	0	0	0	0	10.01180	10.01180	100.23614	1
3	2	2	2	0	0	0	0	8.95650	8.95650	80.21889	1
3	2	3	1	0	0	0	0	9.61060	9.61060	92.36363	1
3	2	3	2	0	0	0	0	9.41860	9.41860	88.71003	1
3	2	4	1	0	0	0	0	9.30660	9.30660	86.61280	1
3	2	4	2	0	0	0	0	8.81450	8.81450	77.69541	1
3	2	5	1	0	0	0	0	7.50000	7.50000	56.25000	1
3	2	5	2	0	0	0	0	8.20420	8.20420	67.30890	1
3	3	1	1	0	0	0	0	12.13120	12.13120	147.16601	1
3	3	1	2	0	0	0	0	9.97990	9.97990	99.59840	1
3	3	2	1	0	0	0	0	11.05630	11.05630	122.24177	1
3	3	2	2	0	0	0	0	10.42200	10.42200	108.61808	1
3	3	3	1	0	0	0	0	11.00000	11.00000	121.00000	1
3	3	3	2	0	0	0	0	9.74270	9.74270	94.92020	1
3	3	4	1	0	0	0	0	10.32960	10.32960	106.70064	1
3	3	4	2	0	0	0	0	9.59710	9.59710	92.10433	1
3	3	5	1	0	0	0	0	9.61930	9.61930	92.53093	1
3	3	5	2	0	0	0	0	11.38070	11.38070	129.52033	1
4	1	1	1	0	0	0	0	7.24860	7.24860	52.54220	1
4	1	1	2	0	0	0	0	8.45000	8.45000	71.40250	1
4	1	2	1	0	0	0	0	9.53730	9.53730	90.96009	1
4	1	2	2	0	0	0	0	8.48120	8.48120	71.93075	1
4	1	3	1	0	0	0	0	8.29000	8.29000	68.72410	1
4	1	3	2	0	0	0	0	7.76330	7.76330	60.26883	1
4	1	4	1	0	0	0	0	10.24720	10.24720	105.00511	1
4	1	4	2	0	0	0	0	7.54000	7.54000	56.85160	1
4	1	5	1	0	0	0	0	6.71600	6.71600	45.10466	1
4	1	5	2	0	0	0	0	7.61700	7.61700	58.01869	1
4	2	1	1	0	0	0	0	11.99780	11.99780	143.94720	1
4	2	1	2	0	0	0	0	9.23400	9.23400	85.26676	1
4	2	2	1	0	0	0	0	10.14520	10.14520	102.92508	1
4	2	2	2	0	0	0	0	9.37550	9.37550	87.90000	1
4	2	3	1	0	0	0	0	11.08220	11.08220	122.81516	1
4	2	3	2	0	0	0	0	9.00760	9.00760	81.13686	1
4	2	4	1	0	0	0	0	9.42980	9.42980	88.92113	1
4	2	4	2	0	0	0	0	8.89600	8.89600	79.13882	1
4	2	5	1	0	0	0	0	8.02000	8.02000	64.32040	1
4	2	5	2	0	0	0	0	8.85170	8.85170	78.39299	1
4	3	1	1	0	0	0	0	10.15000	10.15000	103.02250	1
4	3	1	2	0	0	0	0	9.70730	9.70730	94.23167	1
4	3	2	1	0	0	0	0	10.19570	10.19570	103.95230	1
4	3	2	2	0	0	0	0	9.84090	9.84090	96.84331	1
4	3	3	1	0	0	0	0	11.76420	11.76420	138.39640	1
4	3	3	2	0	0	0	0	9.79760	9.79760	95.99297	1
4	3	4	1	0	0	0	0	9.64550	9.64550	93.03567	1
4	3	4	2	0	0	0	0	9.93200	9.93200	98.64462	1
4	3	5	1	0	0	0	0	8.73000	8.73000	76.21290	1
4	3	5	2	0	0	0	0	11.09660	11.09660	123.13453	1

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

ANALYSIS OF VARIANCE										TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE					
SOURCE										DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	F		
BETWEEN										119	481.4752	0.0	0.0		
WITHIN										0	0.0	0.0			
TOTAL										119	481.4752				

SOURCE										SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H								
1	0	0	0	0	0	0	0		393.6202		393.6202	20	13.1207	2.5771	
2	0	0	0	0	0	0	0		308.9365		308.9365	30	10.2979	-0.2457	
3	0	0	0	0	0	0	0		283.8874		283.8874	30	9.4629	-1.0807	
4	0	0	0	0	0	0	0		278.7902		278.7902	30	9.2930	-1.2506	
3											283.0065				
0	1	0	0	0	0	0	0		383.6149		383.6149	40	9.5904	-0.9532	
0	2	0	0	0	0	0	0		414.2863		414.2863	40	10.3572	-0.1865	
0	3	0	0	0	0	0	0		467.3331		467.3331	40	11.6833	1.1397	
2											89.6953				
0	0	1	0	0	0	0	0		247.5162		247.5162	24	10.3132	-0.2304	
0	0	2	0	0	0	0	0		269.4448		269.4448	24	11.2269	0.6832	
0	0	3	0	0	0	0	0		256.4027		256.4027	24	10.6834	0.1398	
0	0	4	0	0	0	0	0		250.4236		250.4236	24	10.4363	-0.1093	
0	0	5	0	0	0	0	0		241.4470		241.4470	24	10.0603	-0.4833	
4											18.8409				
0	0	0	1	0	0	0	0		634.9906		634.9906	60	10.5832	0.0396	
0	0	0	2	0	0	0	0		630.2437		630.2437	60	10.5041	-0.0396	
1											0.1878				
1	1	0	0	0	0	0	0		121.5498		121.5498	10	12.1550	1.6114	
1	2	0	0	0	0	0	0		129.4911		129.4911	10	12.9491	2.4055	
1	3	0	0	0	0	0	0		142.5793		142.5793	10	14.2579	3.7143	
2	1	0	0	0	0	0	0		93.4450		93.4450	10	9.3445	-1.1991	
2	2	0	0	0	0	0	0		96.8563		96.8563	10	9.6856	-0.8580	
2	3	0	0	0	0	0	0		118.6352		118.6352	10	11.8635	1.3199	
3	1	0	0	0	0	0	0		86.7295		86.7295	10	8.6729	-1.8707	
3	2	0	0	0	0	0	0		91.8991		91.8991	10	9.1899	-1.3537	
3	3	0	0	0	0	0	0		105.2588		105.2588	10	10.5259	-0.0177	
4	1	0	0	0	0	0	0		81.8906		81.8906	10	8.1891	-2.3546	
4	2	0	0	0	0	0	0		96.0398		96.0398	10	9.6040	-0.9396	
4	3	0	0	0	0	0	0		100.8598		100.8598	10	10.0860	-0.4574	
6											380.6370				
1	0	1	0	0	0	0	0		72.3214		72.3214	6	12.0536	1.5099	
1	0	2	0	0	0	0	0		82.6486		82.6486	6	13.7748	3.2311	
1	0	3	0	0	0	0	0		80.3244		80.3244	6	13.3874	2.8438	
1	0	4	0	0	0	0	0		78.6812		78.6812	6	13.1135	2.5699	
1	0	5	0	0	0	0	0		79.6446		79.6446	6	13.2741	2.7305	
2	0	1	0	0	0	0	0		59.2370		59.2370	6	9.8728	-0.6708	
2	0	2	0	0	0	0	0		69.9907		69.9907	6	11.6651	1.1215	
2	0	3	0	0	0	0	0		62.5387		62.5387	6	10.4231	-0.1205	

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/BQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	0	4	0	0	0	0	0	59.6933		59.6933	6	9.9489	-0.5947
2	0	5	0	0	0	0	0	57.4768		57.4768	6	9.5795	-0.9642
3	0	1	0	0	0	0	0	59.1701		59.1701	6	9.8617	-0.6819
3	0	2	0	0	0	0	0	59.2297		59.2297	6	9.8716	-0.6720
3	0	3	0	0	0	0	0	55.8347		55.8347	6	9.3058	-1.2378
3	0	4	0	0	0	0	0	56.3586		56.3586	6	9.3931	-1.1505
3	0	5	0	0	0	0	0	53.2943		53.2943	6	8.8824	-1.6612
4	0	1	0	0	0	0	0	56.7877		56.7877	6	9.4646	-1.0790
4	0	2	0	0	0	0	0	57.5758		57.5758	6	9.5960	-0.9477
4	0	3	0	0	0	0	0	57.7049		57.7049	6	9.6175	-0.9261
4	0	4	0	0	0	0	0	55.6905		55.6905	6	9.2817	-1.2619
4	0	5	0	0	0	0	0	51.0313		51.0313	6	8.5052	-2.0384
12								318.4352					
1	0	0	1	0	0	0	0	194.7658		194.7658	15	12.9844	2.4408
1	0	0	2	0	0	0	0	198.8544		198.8544	15	13.2570	2.7133
2	0	0	1	0	0	0	0	152.2214		152.2214	15	10.1481	-0.3955
2	0	0	2	0	0	0	0	156.7151		156.7151	15	10.4477	-0.0959
3	0	0	1	0	0	0	0	144.8039		144.8039	15	9.6536	-0.8900
3	0	0	2	0	0	0	0	139.0835		139.0835	15	9.2722	-1.2714
4	0	0	1	0	0	0	0	143.1995		143.1995	15	9.5466	-0.9970
4	0	0	2	0	0	0	0	135.5907		135.5907	15	9.0394	-1.5042
3								287.2574					
0	1	1	0	0	0	0	0	71.3074		71.3074	8	8.9134	-1.6302
0	1	2	0	0	0	0	0	83.7783		83.7783	8	10.4723	-0.0713
0	1	3	0	0	0	0	0	75.9198		75.9198	8	9.4900	-1.0536
0	1	4	0	0	0	0	0	80.0372		80.0372	8	10.0046	-0.5390
0	1	5	0	0	0	0	0	72.5722		72.5722	8	9.0715	-1.4721
0	2	1	0	0	0	0	0	83.6623		83.6623	8	10.4578	-0.0858
0	2	2	0	0	0	0	0	88.5021		88.5021	8	11.0628	0.5191
0	2	3	0	0	0	0	0	86.5342		86.5342	8	10.8168	0.2732
0	2	4	0	0	0	0	0	78.7091		78.7091	8	9.8386	-0.7050
0	2	5	0	0	0	0	0	76.8786		76.8786	8	9.6098	-0.9338
0	3	1	0	0	0	0	0	92.5465		92.5465	8	11.5683	1.0247
0	3	2	0	0	0	0	0	97.1644		97.1644	8	12.1455	1.6019
0	3	3	0	0	0	0	0	93.9487		93.9487	8	11.7436	1.2000
0	3	4	0	0	0	0	0	91.6773		91.6773	8	11.4597	0.9160
0	3	5	0	0	0	0	0	91.9962		91.9962	8	11.4995	0.9559
8								118.0783					
0	1	0	1	0	0	0	0	192.8551		192.8551	20	9.6428	-0.9009
0	1	0	2	0	0	0	0	190.7598		190.7598	20	9.5380	-1.0058
0	2	0	1	0	0	0	0	208.0128		208.0128	20	10.4006	-0.1430
0	2	0	2	0	0	0	0	206.2735		206.2735	20	10.3137	-0.2299
0	3	0	1	0	0	0	0	234.1227		234.1227	20	11.7061	1.1625
0	3	0	2	0	0	0	0	233.2104		233.2104	20	11.6605	1.1169
2								89.9015					
0	0	1	1	0	0	0	0	123.6105		123.6105	12	10.3009	-0.2427
0	0	1	2	0	0	0	0	123.9057		123.9057	12	10.3255	-0.2181
0	0	2	1	0	0	0	0	137.9614		137.9614	12	11.4968	0.9532
0	0	2	2	0	0	0	0	131.4834		131.4834	12	10.9569	0.4133
0	0	3	1	0	0	0	0	130.1768		130.1768	12	10.8481	0.3044
0	0	3	2	0	0	0	0	126.2259		126.2259	12	10.5188	-0.0248
0	0	4	1	0	0	0	0	126.8464		126.8464	12	10.5705	0.0269
0	0	4	2	0	0	0	0	123.5772		123.5772	12	10.2981	-0.2455
0	0	5	1	0	0	0	0	116.3955		116.3955	12	9.6996	-0.8440
0	0	5	2	0	0	0	0	125.0515		125.0515	12	10.4210	-0.1227
4								24.8107					

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/No	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
1	1	1	0	0	0	0	0	22.5717		22.5717	2	11.2858	0.7422
1	1	2	0	0	0	0	0	25.4615		25.4615	2	12.7307	2.1871
1	1	3	0	0	0	0	0	24.5396		24.5396	2	12.2698	1.7262
1	1	4	0	0	0	0	0	24.5210		24.5210	2	12.2605	1.7169
1	1	5	0	0	0	0	0	24.4560		24.4560	2	12.2280	1.6844
1	2	1	0	0	0	0	0	22.4371		22.4371	2	11.2185	0.6749
1	2	2	0	0	0	0	0	27.7755		27.7755	2	13.8877	3.3441
1	2	3	0	0	0	0	0	26.6651		26.6651	2	13.3325	2.7889
1	2	4	0	0	0	0	0	25.9634		25.9634	2	12.9817	2.4381
1	2	5	0	0	0	0	0	26.6500		26.6500	2	13.3250	2.7814
1	3	1	0	0	0	0	0	27.3126		27.3126	2	13.6563	3.1127
1	3	2	0	0	0	0	0	29.4116		29.4116	2	14.7058	4.1622
1	3	3	0	0	0	0	0	29.1197		29.1197	2	14.5598	4.0162
1	3	4	0	0	0	0	0	28.1968		28.1968	2	14.0984	3.5548
1	3	5	0	0	0	0	0	28.5386		28.5386	2	14.2693	3.7257
2	1	1	0	0	0	0	0	16.0544		16.0544	2	8.0272	-2.5164
2	1	2	0	0	0	0	0	21.5152		21.5152	2	10.7576	0.2140
2	1	3	0	0	0	0	0	19.2641		19.2641	2	9.6320	-0.9116
2	1	4	0	0	0	0	0	19.4182		19.4182	2	9.7091	-0.8345
2	1	5	0	0	0	0	0	17.1931		17.1931	2	8.5965	-1.9471
2	2	1	0	0	0	0	0	19.9171		19.9171	2	9.9585	-0.5851
2	2	2	0	0	0	0	0	22.2376		22.2376	2	11.1188	0.5752
2	2	3	0	0	0	0	0	20.7501		20.7501	2	10.3750	-0.1686
2	2	4	0	0	0	0	0	16.2988		16.2988	2	8.1494	-2.3942
2	2	5	0	0	0	0	0	17.6527		17.6527	2	8.8263	-1.7173
2	3	1	0	0	0	0	0	23.2655		23.2655	2	11.6327	1.0891
2	3	2	0	0	0	0	0	26.2379		26.2379	2	13.1189	2.5753
2	3	3	0	0	0	0	0	22.5245		22.5245	2	11.2622	0.7186
2	3	4	0	0	0	0	0	23.9763		23.9763	2	11.9881	1.4445
2	3	5	0	0	0	0	0	22.6310		22.6310	2	11.3155	0.7719
3	1	1	0	0	0	0	0	16.9827		16.9827	2	8.4913	-2.0523
3	1	2	0	0	0	0	0	18.7831		18.7831	2	9.3915	-1.1521
3	1	3	0	0	0	0	0	16.0628		16.0628	2	8.0314	-2.5122
3	1	4	0	0	0	0	0	18.3108		18.3108	2	9.1554	-1.3882
3	1	5	0	0	0	0	0	16.5901		16.5901	2	8.2950	-2.2486
3	2	1	0	0	0	0	0	20.0763		20.0763	2	10.0381	-0.5055
3	2	2	0	0	0	0	0	18.9683		18.9683	2	9.4841	-1.0595
3	2	3	0	0	0	0	0	19.0292		19.0292	2	9.5146	-1.0290
3	2	4	0	0	0	0	0	18.1211		18.1211	2	9.0605	-1.4831
3	2	5	0	0	0	0	0	15.7042		15.7042	2	7.8521	-2.6913
3	3	1	0	0	0	0	0	22.1111		22.1111	2	11.0555	0.5119
3	3	2	0	0	0	0	0	21.4783		21.4783	2	10.7391	0.1955
3	3	3	0	0	0	0	0	20.7427		20.7427	2	10.3713	-0.1723
3	3	4	0	0	0	0	0	19.9267		19.9267	2	9.9633	-0.5803
3	3	5	0	0	0	0	0	21.0000		21.0000	2	10.5000	-0.0436
4	1	1	0	0	0	0	0	15.6986		15.6986	2	7.8493	-2.6943
4	1	2	0	0	0	0	0	16.0185		16.0185	2	8.0092	-1.5344
4	1	3	0	0	0	0	0	16.0533		16.0533	2	8.0266	-2.5170
4	1	4	0	0	0	0	0	17.7872		17.7872	2	8.8936	-1.6500
4	1	5	0	0	0	0	0	14.3330		14.3330	2	7.1665	-3.3771
4	2	1	0	0	0	0	0	21.2318		21.2318	2	10.6159	0.0723
4	2	2	0	0	0	0	0	19.5207		19.5207	2	9.7603	-0.7833
4	2	3	0	0	0	0	0	20.0898		20.0898	2	10.0449	-0.4987
4	2	4	0	0	0	0	0	18.3258		18.3258	2	9.1629	-1.3807
4	2	5	0	0	0	0	0	16.8717		16.8717	2	8.4358	-2.1078
4	3	1	0	0	0	0	0	19.8573		19.8573	2	9.9286	-0.6150
4	3	2	0	0	0	0	0	20.0366		20.0366	2	10.0183	-0.5253
4	3	3	0	0	0	0	0	21.5618		21.5618	2	10.7809	0.2373
4	3	4	0	0	0	0	0	19.5775		19.5775	2	9.7887	-0.7549
4	3	5	0	0	0	0	0	19.8266		19.8266	2	9.9133	-0.6303
24								438.6120					
1	1	0	1	0	0	0	0	60.6839		60.6839	5	12.1368	1.5932
1	1	0	2	0	0	0	0	60.8659		60.8659	5	12.1732	1.6296
1	2	0	1	0	0	0	0	62.7606		62.7606	5	12.5521	2.0085

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	2	0	2	0	0	0	0	66.7305		66.7305	5	13.3461	2.8025
1	3	0	1	0	0	0	0	71.3213		71.3213	5	14.2643	3.7206
1	3	0	2	0	0	0	0	71.2580		71.2580	5	14.2516	3.7080
2	1	0	1	0	0	0	0	46.5984		46.5984	5	9.3197	-1.2239
2	1	0	2	0	0	0	0	46.8466		46.8466	5	9.3693	-1.1743
2	2	0	1	0	0	0	0	47.4434		47.4434	5	9.4887	-1.0549
2	2	0	2	0	0	0	0	49.4129		49.4129	5	9.8826	-0.6610
2	3	0	1	0	0	0	0	58.1796		58.1796	5	11.6359	1.0923
2	3	0	2	0	0	0	0	60.4556		60.4556	5	12.0911	1.5475
3	1	0	1	0	0	0	0	43.5337		43.5337	5	8.7067	-1.8369
3	1	0	2	0	0	0	0	43.1958		43.1958	5	8.6392	-1.9045
3	2	0	1	0	0	0	0	47.1338		47.1338	5	9.4268	-1.1169
3	2	0	2	0	0	0	0	44.7653		44.7653	5	8.9531	-1.5906
3	3	0	1	0	0	0	0	54.1364		54.1364	5	10.8273	0.2837
3	3	0	2	0	0	0	0	51.1224		51.1224	5	10.2245	-0.3191
4	1	0	1	0	0	0	0	42.0391		42.0391	5	8.4078	-2.1358
4	1	0	2	0	0	0	0	39.8515		39.8515	5	7.9703	-2.5733
4	2	0	1	0	0	0	0	50.6750		50.6750	5	10.1350	-0.4086
4	2	0	2	0	0	0	0	45.3648		45.3648	5	9.0730	-1.4707
4	3	0	1	0	0	0	0	50.4854		50.4854	5	10.0971	-0.4465
4	3	0	2	0	0	0	0	50.3744		50.3744	5	10.0749	-0.4687
6									387.9092				
1	0	1	1	0	0	0	0	34.4072		34.4072	3	11.4691	0.9254
1	0	1	2	0	0	0	0	37.9142		37.9142	3	12.6381	2.0944
1	0	2	1	0	0	0	0	42.1839		42.1839	3	14.0613	3.5177
1	0	2	2	0	0	0	0	40.4647		40.4647	3	13.4882	2.9446
1	0	3	1	0	0	0	0	39.8004		39.8004	3	13.2668	2.7232
1	0	3	2	0	0	0	0	40.5240		40.5240	3	13.5080	2.9644
1	0	4	1	0	0	0	0	39.0914		39.0914	3	13.0305	2.4868
1	0	4	2	0	0	0	0	39.5898		39.5898	3	13.1966	2.6530
1	0	5	1	0	0	0	0	39.2829		39.2829	3	13.0943	2.5507
1	0	5	2	0	0	0	0	40.3617		40.3617	3	13.4539	2.9103
2	0	1	1	0	0	0	0	28.8203		28.8203	3	9.6068	-0.9369
2	0	1	2	0	0	0	0	30.4167		30.4167	3	10.1389	-0.4047
2	0	2	1	0	0	0	0	35.3781		35.3781	3	11.7927	1.2491
2	0	2	2	0	0	0	0	34.6126		34.6126	3	11.5375	0.9939
2	0	3	1	0	0	0	0	30.8244		30.8244	3	10.2748	-0.2688
2	0	3	2	0	0	0	0	31.7143		31.7143	3	10.5714	0.0278
2	0	4	1	0	0	0	0	29.0505		29.0505	3	9.6835	-0.8601
2	0	4	2	0	0	0	0	30.6428		30.6428	3	10.2143	-0.3294
2	0	5	1	0	0	0	0	28.1481		28.1481	3	9.3827	-1.1609
2	0	5	2	0	0	0	0	29.3287		29.3287	3	9.7767	-0.7674
3	0	1	1	0	0	0	0	30.9866		30.9866	3	10.3289	-0.2148
3	0	1	2	0	0	0	0	28.1835		28.1835	3	9.3945	-1.1491
3	0	2	1	0	0	0	0	30.5212		30.5212	3	10.1737	-0.3699
3	0	2	2	0	0	0	0	28.7085		28.7085	3	9.5695	-0.9741
3	0	3	1	0	0	0	0	28.4156		28.4156	3	9.4719	-1.0718
3	0	3	2	0	0	0	0	27.4191		27.4191	3	9.1397	-1.4039
3	0	4	1	0	0	0	0	29.3820		29.3820	3	9.7940	-0.7496
3	0	4	2	0	0	0	0	28.9766		28.9766	3	8.9922	-1.5514
3	0	5	1	0	0	0	0	25.4985		25.4985	3	8.4995	-2.0441
3	0	5	2	0	0	0	0	27.7958		27.7958	3	9.2653	-1.2784
4	0	1	1	0	0	0	0	29.3964		29.3964	3	9.7988	-0.7448
4	0	1	2	0	0	0	0	27.3913		27.3913	3	9.1304	-1.4132
4	0	2	1	0	0	0	0	29.8782		29.8782	3	9.9594	-0.5842
4	0	2	2	0	0	0	0	27.6976		27.6976	3	9.2325	-1.3111
4	0	3	1	0	0	0	0	31.1364		31.1364	3	10.3788	-0.1648
4	0	3	2	0	0	0	0	26.5685		26.5685	3	8.8562	-1.6875
4	0	4	1	0	0	0	0	29.3225		29.3225	3	9.7742	-0.7695
4	0	4	2	0	0	0	0	26.3680		26.3680	3	8.7893	-1.7543
4	0	5	1	0	0	0	0	23.4660		23.4660	3	7.8220	-2.7216
4	0	5	2	0	0	0	0	27.5653		27.5653	3	9.1884	-1.3552
12									335.6720				

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/BQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
0	1	1	1	0	0	0	0	35.0460		35.0460	4	8.7615	-1.7821
0	1	1	2	0	0	0	0	36.2614		36.2614	4	9.0653	-1.4783
0	1	2	1	0	0	0	0	42.7901		42.7901	4	10.6975	0.1539
0	1	2	2	0	0	0	0	40.9882		40.9882	4	10.2470	-0.2966
0	1	3	1	0	0	0	0	36.6631		36.6631	4	9.1658	-1.3778
0	1	3	2	0	0	0	0	39.2567		39.2567	4	9.8142	-0.7294
0	1	4	1	0	0	0	0	42.2367		42.2367	4	10.5592	0.0156
0	1	4	2	0	0	0	0	37.8005		37.8005	4	9.4501	-1.0935
0	1	5	1	0	0	0	0	36.1192		36.1192	4	9.0298	-1.5138
0	1	5	2	0	0	0	0	36.4530		36.4530	4	9.1132	-1.4304
0	2	1	1	0	0	0	0	41.7815		41.7815	4	10.4454	-0.0982
0	2	1	2	0	0	0	0	41.8808		41.8808	4	10.4702	-0.0734
0	2	2	1	0	0	0	0	46.0031		46.0031	4	11.5008	0.9572
0	2	2	2	0	0	0	0	42.4990		42.4990	4	10.6247	0.0811
0	2	3	1	0	0	0	0	45.2928		45.2928	4	11.3232	0.7796
0	2	3	2	0	0	0	0	41.2414		41.2414	4	10.3103	-0.2333
0	2	4	1	0	0	0	0	39.0490		39.0490	4	9.7622	-0.7814
0	2	4	2	0	0	0	0	39.6601		39.6601	4	9.9150	-0.6286
0	2	5	1	0	0	0	0	35.8864		35.8864	4	8.9716	-1.5720
0	2	5	2	0	0	0	0	40.9922		40.9922	4	10.2480	-0.2956
0	3	1	1	0	0	0	0	46.7830		46.7830	4	11.6957	1.1521
0	3	1	2	0	0	0	0	45.7635		45.7635	4	11.4409	0.8973
0	3	2	1	0	0	0	0	49.1682		49.1682	4	12.2920	1.7484
0	3	2	2	0	0	0	0	47.9962		47.9962	4	11.9990	1.4554
0	3	3	1	0	0	0	0	48.2209		48.2209	4	12.0552	1.5116
0	3	3	2	0	0	0	0	45.7278		45.7278	4	11.4319	0.8883
0	3	4	1	0	0	0	0	45.5607		45.5607	4	11.3902	0.8466
0	3	4	2	0	0	0	0	46.1166		46.1166	4	11.5291	0.9855
0	3	5	1	0	0	0	0	44.3899		44.3899	4	11.0975	0.5539
0	3	5	2	0	0	0	0	47.6063		47.6063	4	11.9016	1.3580
								8	131.2871				
1	1	1	1	0	0	0	0	11.6018		11.6018	1	11.6018	1.0582
1	1	1	2	0	0	0	0	10.9699		10.9699	1	10.9699	0.4263
1	1	2	1	0	0	0	0	13.0328		13.0328	1	13.0328	2.4892
1	1	2	2	0	0	0	0	12.4287		12.4287	1	12.4287	1.8851
1	1	3	1	0	0	0	0	11.6954		11.6954	1	11.6954	1.1518
1	1	3	2	0	0	0	0	12.8442		12.8442	1	12.8442	2.3006
1	1	4	1	0	0	0	0	12.3110		12.3110	1	12.3110	1.7674
1	1	4	2	0	0	0	0	12.2100		12.2100	1	12.2100	1.6664
1	1	5	1	0	0	0	0	12.0429		12.0429	1	12.0429	1.4993
1	1	5	2	0	0	0	0	12.4131		12.4131	1	12.4131	1.8695
1	2	1	1	0	0	0	0	9.5000		9.5000	1	9.5000	-1.0436
1	2	1	2	0	0	0	0	12.9371		12.9371	1	12.9371	2.3935
1	2	2	1	0	0	0	0	14.1095		14.1095	1	14.1095	3.5659
1	2	2	2	0	0	0	0	13.6660		13.6660	1	13.6660	3.1224
1	2	3	1	0	0	0	0	13.4550		13.4550	1	13.4550	2.9114
1	2	3	2	0	0	0	0	13.2101		13.2101	1	13.2101	2.6665
1	2	4	1	0	0	0	0	12.8711		12.8711	1	12.8711	2.3275
1	2	4	2	0	0	0	0	13.0923		13.0923	1	13.0923	2.5487
1	2	5	1	0	0	0	0	12.8250		12.8250	1	12.8250	2.2814
1	2	5	2	0	0	0	0	13.8250		13.8250	1	13.8250	3.2814
1	3	1	1	0	0	0	0	13.3054		13.3054	1	13.3054	2.7618
1	3	1	2	0	0	0	0	14.0072		14.0072	1	14.0072	3.4636
1	3	2	1	0	0	0	0	15.0416		15.0416	1	15.0416	4.4980
1	3	2	2	0	0	0	0	14.3700		14.3700	1	14.3700	3.8284
1	3	3	1	0	0	0	0	14.6500		14.6500	1	14.6500	4.1064
1	3	3	2	0	0	0	0	14.4697		14.4697	1	14.4697	3.9261
1	3	4	1	0	0	0	0	13.9093		13.9093	1	13.9093	3.5657
1	3	4	2	0	0	0	0	14.2875		14.2875	1	14.2875	3.7439
1	3	5	1	0	0	0	0	14.4150		14.4150	1	14.4150	3.8714
1	3	5	2	0	0	0	0	14.1236		14.1236	1	14.1236	3.5800
2	1	1	1	0	0	0	0	8.0450		8.0450	1	8.0450	-2.4986
2	1	1	2	0	0	0	0	8.0094		8.0094	1	8.0094	-2.5342

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE W/M/NO	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	1	2	1	0	0	0	0	10.7669		10.7669	1	10.7669	0.2233
2	1	2	2	0	0	0	0	10.7483		10.7483	1	10.7483	0.2047
2	1	3	1	0	0	0	0	8.8727		8.8727	1	8.8727	-1.6709
2	1	3	2	0	0	0	0	10.3914		10.3914	1	10.3914	-0.1922
2	1	4	1	0	0	0	0	9.9327		9.9327	1	9.9327	-0.6109
2	1	4	2	0	0	0	0	9.4855		9.4855	1	9.4855	-1.0581
2	1	5	1	0	0	0	0	8.9811		8.9811	1	8.9811	-1.5625
2	1	5	2	0	0	0	0	8.2120		8.2120	1	8.2120	-2.3316
2	2	1	1	0	0	0	0	9.5789		9.5789	1	9.5789	-0.9647
2	2	1	2	0	0	0	0	10.3382		10.3382	1	10.3382	-0.2054
2	2	2	1	0	0	0	0	11.7366		11.7366	1	11.7366	1.1930
2	2	2	2	0	0	0	0	10.5010		10.5010	1	10.5010	-0.0426
2	2	3	1	0	0	0	0	11.1450		11.1450	1	11.1450	0.6014
2	2	3	2	0	0	0	0	9.6051		9.6051	1	9.6051	-0.9385
2	2	4	1	0	0	0	0	7.4415		7.4415	1	7.4415	-3.1021
2	2	4	2	0	0	0	0	8.8573		8.8573	1	8.8573	-1.6863
2	2	5	1	0	0	0	0	7.5414		7.5414	1	7.5414	-3.0022
2	2	5	2	0	0	0	0	10.1113		10.1113	1	10.1113	-0.4323
2	3	1	1	0	0	0	0	11.1964		11.1964	1	11.1964	0.6528
2	3	1	2	0	0	0	0	12.0691		12.0691	1	12.0691	1.5255
2	3	2	1	0	0	0	0	12.8746		12.8746	1	12.8746	2.3310
2	3	2	2	0	0	0	0	13.3633		13.3633	1	13.3633	2.8197
2	3	3	1	0	0	0	0	10.8067		10.8067	1	10.8067	0.2631
2	3	3	2	0	0	0	0	11.7178		11.7178	1	11.7178	1.1742
2	3	4	1	0	0	0	0	11.6763		11.6763	1	11.6763	1.1327
2	3	4	2	0	0	0	0	12.3000		12.3000	1	12.3000	1.7564
2	3	5	1	0	0	0	0	11.6256		11.6256	1	11.6256	1.0820
2	3	5	2	0	0	0	0	11.0054		11.0054	1	11.0054	0.4618
3	1	1	1	0	0	0	0	8.1506		8.1506	1	8.1506	-2.3930
3	1	1	2	0	0	0	0	8.8321		8.8321	1	8.8321	-1.7115
3	1	2	1	0	0	0	0	9.4531		9.4531	1	9.4531	-1.0905
3	1	2	2	0	0	0	0	9.3300		9.3300	1	9.3300	-1.2136
3	1	3	1	0	0	0	0	7.8050		7.8050	1	7.8050	-2.7386
3	1	3	2	0	0	0	0	8.2578		8.2578	1	8.2578	-2.2858
3	1	4	1	0	0	0	0	9.7458		9.7458	1	9.7458	-0.7978
3	1	4	2	0	0	0	0	8.5650		8.5650	1	8.5650	-1.9786
3	1	5	1	0	0	0	0	8.3792		8.3792	1	8.3792	-2.1544
3	1	5	2	0	0	0	0	8.2109		8.2109	1	8.2109	-2.3327
3	2	1	1	0	0	0	0	10.7048		10.7048	1	10.7048	0.1612
3	2	1	2	0	0	0	0	9.3715		9.3715	1	9.3715	-1.1721
3	2	2	1	0	0	0	0	10.0118		10.0118	1	10.0118	-0.5318
3	2	2	2	0	0	0	0	8.9565		8.9565	1	8.9565	-1.5871
3	2	3	1	0	0	0	0	9.6106		9.6106	1	9.6106	-0.9330
3	2	3	2	0	0	0	0	9.4186		9.4186	1	9.4186	-1.1250
3	2	4	1	0	0	0	0	9.3066		9.3066	1	9.3066	-1.2370
3	2	4	2	0	0	0	0	8.8145		8.8145	1	8.8145	-1.7291
3	2	5	1	0	0	0	0	7.5000		7.5000	1	7.5000	-3.0436
3	2	5	2	0	0	0	0	8.2042		8.2042	1	8.2042	-2.3394
3	3	1	1	0	0	0	0	12.1312		12.1312	1	12.1312	1.5878
3	3	1	2	0	0	0	0	9.9799		9.9799	1	9.9799	-0.5637
3	3	2	1	0	0	0	0	11.0563		11.0563	1	11.0563	0.5127
3	3	2	2	0	0	0	0	10.4220		10.4220	1	10.4220	-0.1216
3	3	3	1	0	0	0	0	11.0000		11.0000	1	11.0000	0.4564
3	3	3	2	0	0	0	0	9.7427		9.7427	1	9.7427	-0.8009
3	3	4	1	0	0	0	0	10.3296		10.3296	1	10.3296	-0.2140
3	3	4	2	0	0	0	0	9.5971		9.5971	1	9.5971	-0.9465
3	3	5	1	0	0	0	0	9.6193		9.6193	1	9.6193	-0.9243
3	3	5	2	0	0	0	0	11.3807		11.3807	1	11.3807	0.8371
4	1	1	1	0	0	0	0	7.2486		7.2486	1	7.2486	-3.2950
4	1	1	2	0	0	0	0	8.4500		8.4500	1	8.4500	-2.0936
4	1	2	1	0	0	0	0	9.5373		9.5373	1	9.5373	-1.0063
4	1	2	2	0	0	0	0	8.4812		8.4812	1	8.4812	-2.0624
4	1	3	1	0	0	0	0	8.2900		8.2900	1	8.2900	-2.2536
4	1	3	2	0	0	0	0	7.7633		7.7633	1	7.7633	-2.7803
4	1	4	1	0	0	0	0	10.2472		10.2472	1	10.2472	-0.2964
4	1	4	2	0	0	0	0	7.5400		7.5400	1	7.5400	-3.0036

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SOURCE								SUM X1	CRUDE SUM/Hz	SUM X2	FREQUENCY	MEAN X1	EFFDET X1
A	B	C	D	E	F	G	H						
4	1	5	1	0	0	0	0	6.7160		6.7160	1	6.7160	-3.6276
4	1	5	2	0	0	0	0	7.6170		7.6170	1	7.6170	-2.9266
4	2	1	1	0	0	0	0	11.9978		11.9978	1	11.9978	1.4542
4	2	1	2	0	0	0	0	9.2340		9.2340	1	9.2340	-1.3098
4	2	2	1	0	0	0	0	10.1452		10.1452	1	10.1452	-0.3984
4	2	2	2	0	0	0	0	9.3755		9.3755	1	9.3755	-1.1681
4	2	3	1	0	0	0	0	11.0822		11.0822	1	11.0822	0.5386
4	2	3	2	0	0	0	0	9.0076		9.0076	1	9.0076	-1.5360
4	2	4	1	0	0	0	0	9.4298		9.4298	1	9.4298	-1.1138
4	2	4	2	0	0	0	0	8.8960		8.8960	1	8.8960	-1.8478
4	2	5	1	0	0	0	0	8.0200		8.0200	1	8.0200	-2.5236
4	2	5	2	0	0	0	0	8.8517		8.8517	1	8.8517	-1.4919
4	3	1	1	0	0	0	0	10.1300		10.1300	1	10.1300	-0.3936
4	3	1	2	0	0	0	0	9.7073		9.7073	1	9.7073	-0.8363
4	3	2	1	0	0	0	0	10.1957		10.1957	1	10.1957	-0.3479
4	3	2	2	0	0	0	0	9.8409		9.8409	1	9.8409	-0.7027
4	3	3	1	0	0	0	0	11.7642		11.7642	1	11.7642	1.2206
4	3	3	2	0	0	0	0	9.7976		9.7976	1	9.7976	-0.7440
4	3	4	1	0	0	0	0	9.6455		9.6455	1	9.6455	-0.8981
4	3	4	2	0	0	0	0	9.9320		9.9320	1	9.9320	-0.6116
4	3	5	1	0	0	0	0	8.7300		8.7300	1	8.7300	-1.8136
4	3	5	2	0	0	0	0	11.0968		11.0968	1	11.0968	0.5530
24									481.4752				

TABLE 8.2-11. TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE (Cont)

SUMMARY OF ANALYSIS										TELPS P-LEG PERFORMANCE ANALYSIS FOR RESISTANCE					
SOURCE										DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE	
A	B	C	D	E	F	G									
1	0	0	0	0	0	0	0	0	0	AA	3	283.0065	94.3355		
0	1	0	0	0	0	0	0	0	0	BB	2	89.6953	44.8476		
0	0	1	0	0	0	0	0	0	0	CC	4	18.8409	4.7102		
0	0	0	1	0	0	0	0	0	0	DD	1	0.1878	0.1878		
1	1	0	0	0	0	0	0	0	0	AB	6	7.9351	1.3225		
1	0	1	0	0	0	0	0	0	0	AC	12	16.5879	1.3823		
1	0	0	1	0	0	0	0	0	0	AD	3	4.0631	1.3544		
0	1	1	0	0	0	0	0	0	0	BC	7	9.5422	1.1928		
0	1	0	1	0	0	0	0	0	0	BD	2	0.0184	0.0092		
0	0	1	1	0	0	0	0	0	0	CD	4	9.7820	1.4455		
1	1	1	0	0	0	0	0	0	0	ABC	24	13.0042	0.5418		
1	1	0	1	0	0	0	0	0	0	ABD	6	3.0029	0.5005		
1	0	1	1	0	0	0	0	0	0	ACD	12	7.2038	0.6003		
0	1	1	1	0	0	0	0	0	0	BCD	8	7.2205	0.9026		
1	1	1	1	0	0	0	0	0	0	ABCD	24	15.3845	0.6410		
RESIDUAL											0	0.0018	0.0		
6% SIGNIFICANT BASED ON ERROR MS = 1.1104 w/ 60 df															

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	1	0	0	0	0	65.86540	65.86540	4338.25092	1
1	1	1	2	0	0	0	0	65.52500	65.52500	4293.52562	1
1	1	2	1	0	0	0	0	69.18580	69.18580	4786.67492	1
1	1	2	2	0	0	0	0	71.70870	71.70870	5142.13766	1
1	1	3	1	0	0	0	0	66.58080	66.58080	4433.00293	1
1	1	3	2	0	0	0	0	67.21670	67.21670	4518.08476	1
1	1	4	1	0	0	0	0	67.81490	67.81490	4598.86066	1
1	1	4	2	0	0	0	0	66.92110	66.92110	4478.43363	1
1	1	5	1	0	0	0	0	67.30850	67.30850	4530.43417	1
1	1	5	2	0	0	0	0	67.23680	67.23680	4520.78727	1
1	2	1	1	0	0	0	0	76.50000	76.50000	5852.25000	1
1	2	1	2	0	0	0	0	83.36030	83.36030	6948.93962	1
1	2	2	1	0	0	0	0	85.85540	85.85540	7371.14971	1
1	2	2	2	0	0	0	0	84.76590	84.76590	7185.25780	1
1	2	3	1	0	0	0	0	84.74590	84.74590	7181.86757	1
1	2	3	2	0	0	0	0	84.34630	84.34630	7114.29832	1
1	2	4	1	0	0	0	0	83.16610	83.16610	6916.60019	1
1	2	4	2	0	0	0	0	83.21460	83.21460	6924.66965	1
1	2	5	1	0	0	0	0	84.26990	84.26990	7101.41605	1
1	2	5	2	0	0	0	0	82.69500	82.69500	6838.46302	1
1	3	1	1	0	0	0	0	97.86840	97.86840	9578.22372	1
1	3	1	2	0	0	0	0	98.58990	98.58990	9719.96838	1
1	3	2	1	0	0	0	0	99.80690	99.80690	9961.41729	1
1	3	2	2	0	0	0	0	99.35850	99.35850	9872.11152	1
1	3	3	1	0	0	0	0	99.78570	99.78570	9957.18592	1
1	3	3	2	0	0	0	0	99.29940	99.29940	9860.37084	1
1	3	4	1	0	0	0	0	98.02430	98.02430	9608.76339	1
1	3	4	2	0	0	0	0	96.74910	96.74910	9360.38835	1
1	3	5	1	0	0	0	0	98.74000	98.74000	9749.58760	1
1	3	5	2	0	0	0	0	97.62490	97.62490	9530.62110	1
2	1	1	1	0	0	0	0	59.44290	59.44290	3533.45836	1
2	1	1	2	0	0	0	0	57.49340	57.49340	3305.49104	1
2	1	2	1	0	0	0	0	63.90270	63.90270	4083.55507	1
2	1	2	2	0	0	0	0	64.03490	64.03490	4100.46842	1
2	1	3	1	0	0	0	0	61.08900	61.08900	3731.86592	1
2	1	3	2	0	0	0	0	63.09610	63.09610	3981.11784	1
2	1	4	1	0	0	0	0	62.03790	62.03790	3848.70104	1
2	1	4	2	0	0	0	0	61.08050	61.08050	3730.82748	1
2	1	5	1	0	0	0	0	60.26660	60.26660	3632.06308	1
2	1	5	2	0	0	0	0	59.56210	59.56210	3547.64376	1
2	2	1	1	0	0	0	0	76.15210	76.15210	5799.14233	1
2	2	1	2	0	0	0	0	76.20400	76.20400	5807.04962	1
2	2	2	1	0	0	0	0	81.00170	81.00170	6561.27540	1
2	2	2	2	0	0	0	0	78.15190	78.15190	6107.71947	1
2	2	3	1	0	0	0	0	79.15090	79.15090	6264.86497	1
2	2	3	2	0	0	0	0	74.05180	74.05180	5483.66908	1
2	2	4	1	0	0	0	0	70.31850	70.31850	4944.69144	1
2	2	4	2	0	0	0	0	73.15530	73.15530	5351.69792	1
2	2	5	1	0	0	0	0	70.94420	70.94420	5033.07951	1
2	2	5	2	0	0	0	0	74.52400	74.52400	5553.82658	1
2	3	1	1	0	0	0	0	93.47770	93.47770	8738.08040	1
2	3	1	2	0	0	0	0	92.71240	92.71240	8595.58911	1
2	3	2	1	0	0	0	0	95.87200	95.87200	9191.44038	1
2	3	2	2	0	0	0	0	95.96000	95.96000	9208.32160	1
2	3	3	1	0	0	0	0	93.56670	93.56670	8754.72735	1
2	3	3	2	0	0	0	0	93.87460	93.87460	8812.44053	1
2	3	4	1	0	0	0	0	93.35240	93.35240	8714.67059	1
2	3	4	2	0	0	0	0	93.00000	93.00000	8649.00000	1

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

A	B	C	D	E	F	G	H	X1	X2	X3	M
2	3	5	2	0	0	0	0	92.90440	92.90440	8631.2275	1
2	3	5	2	0	0	0	0	91.72390	91.72390	8413.27369	1
3	1	1	1	0	0	0	0	56.47700	56.47700	3189.65153	1
3	1	1	1	0	0	0	0	55.74700	55.74700	3107.72801	1
3	1	2	2	0	0	0	0	59.97890	59.97890	3597.46845	1
3	1	2	2	0	0	0	0	61.27000	61.27000	3754.01290	1
3	1	3	1	0	0	0	0	56.60660	56.60660	3204.30716	1
3	1	3	2	0	0	0	0	58.15570	58.15570	3382.08544	1
3	1	4	1	0	0	0	0	60.39110	60.39110	3647.08496	1
3	1	5	1	0	0	0	0	58.21240	58.21240	3388.68351	1
3	1	5	1	0	0	0	0	57.38580	57.38580	3293.13004	1
3	1	5	2	0	0	0	0	57.45320	57.45320	3300.87019	1
3	2	1	1	0	0	0	0	75.15130	75.15130	5647.71789	1
3	2	1	2	0	0	0	0	74.35240	74.35240	5528.27939	1
3	2	2	1	0	0	0	0	77.18270	77.18270	5957.16918	1
3	2	2	2	0	0	0	0	72.98130	72.98130	5326.27015	1
3	2	3	1	0	0	0	0	73.76490	73.76490	5441.26047	1
3	2	3	2	0	0	0	0	73.06080	73.06080	5337.88050	1
3	2	4	1	0	0	0	0	70.85430	70.85430	5020.33183	1
3	2	4	2	0	0	0	0	72.58720	72.58720	5268.90160	1
3	2	5	1	0	0	0	0	69.00000	69.00000	4761.00000	1
3	2	5	2	0	0	0	0	68.38890	68.38890	4677.04164	1
3	3	1	1	0	0	0	0	88.15520	88.15520	7771.33929	1
3	3	1	2	0	0	0	0	88.00740	88.00740	7745.30245	1
3	3	2	1	0	0	0	0	90.96710	90.96710	8275.01328	1
3	3	2	2	0	0	0	0	90.02060	90.02060	8103.70842	1
3	3	3	1	0	0	0	0	87.50000	87.50000	7656.25000	1
3	3	3	2	0	0	0	0	88.41570	88.41570	7817.33601	1
3	3	4	1	0	0	0	0	89.79160	89.79160	8062.53143	1
3	3	4	2	0	0	0	0	87.39490	87.39490	7637.86855	1
3	3	5	1	0	0	0	0	88.79130	88.79130	7883.89496	1
3	3	5	2	0	0	0	0	84.48060	84.48060	7136.97178	1
4	1	1	1	0	0	0	0	53.97560	53.97560	2913.36540	1
4	1	2	1	0	0	0	0	55.48050	55.48050	3078.08588	1
4	1	2	1	0	0	0	0	56.62420	56.62420	3206.30003	1
4	1	2	2	0	0	0	0	59.76990	59.76990	3572.44095	1
4	1	3	1	0	0	0	0	56.85000	56.85000	3231.92250	1
4	1	3	2	0	0	0	0	56.23610	56.23610	3162.49894	1
4	1	4	1	0	0	0	0	57.07440	57.07440	3257.48714	1
4	1	4	2	0	0	0	0	55.04810	55.04810	3030.29331	1
4	1	5	1	0	0	0	0	54.59890	54.59890	2981.03988	1
4	1	5	2	0	0	0	0	55.10090	55.10090	3036.10918	1
4	2	1	1	0	0	0	0	72.77660	72.77660	5296.43351	1
4	2	1	2	0	0	0	0	71.10870	71.10870	5056.44722	1
4	2	2	1	0	0	0	0	76.43440	76.43440	5842.21750	1
4	2	2	2	0	0	0	0	72.23430	72.23430	5217.79410	1
4	2	3	1	0	0	0	0	70.57210	70.57210	4980.42130	1
4	2	3	2	0	0	0	0	70.93110	70.93110	5031.22095	1
4	2	4	1	0	0	0	0	69.68110	69.68110	4855.45570	1
4	2	4	2	0	0	0	0	70.74390	70.74390	5004.69939	1
4	2	5	1	0	0	0	0	69.34660	69.34660	4808.95093	1
4	2	5	2	0	0	0	0	68.80600	68.80600	4734.26564	1
4	3	1	1	0	0	0	0	87.70300	87.70300	7691.81621	1
4	3	1	2	0	0	0	0	85.46760	85.46760	7304.71065	1
4	3	2	1	0	0	0	0	89.75220	89.75220	8055.45740	1
4	3	2	2	0	0	0	0	87.34810	87.34810	7629.69057	1
4	3	3	1	0	0	0	0	85.21070	85.21070	7260.86339	1
4	3	3	2	0	0	0	0	88.91180	88.91180	7905.30818	1
4	3	4	1	0	0	0	0	86.58980	86.58980	7497.79346	1
4	3	4	2	0	0	0	0	88.62690	88.62690	7894.72740	1
4	3	5	1	0	0	0	0	87.70000	87.70000	7691.29000	1
4	3	5	2	0	0	0	0	84.71210	84.71210	7176.13989	1

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

ANALYSIS OF VARIANCE TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE												
SOURCE			DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F			
BETWEEN			119		22394.5875		0.0		0.0			
WITHIN			0		0.0		0.0					
TOTAL			119		22394.5875							

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	0	0	0	0	0	0	0	2494.1302		2494.1302	30	83.1377	7.0195
2	0	0	0	0	0	0	0	2302.1046		2302.1046	30	76.7368	0.6187
3	0	0	0	0	0	0	0	2192.5259		2192.5259	30	73.0842	-3.0339
4	0	0	0	0	0	0	0	2145.4156		2145.4156	30	71.5139	-4.6043
3								2401.8264					
0	1	0	0	0	0	0	0	2429.8061		2429.8061	40	60.7452	-15.3730
0	2	0	0	0	0	0	0	3026.5324		3026.5324	40	75.6633	-0.4548
0	3	0	0	0	0	0	0	3677.8378		3677.8378	40	91.9459	15.8278
2								19482.2010					
0	0	1	0	0	0	0	0	1807.5938		1807.5938	24	75.3164	-0.8017
0	0	2	0	0	0	0	0	1884.1681		1884.1681	24	78.5070	2.3889
0	0	3	0	0	0	0	0	1833.0194		1833.0194	24	76.3758	0.2577
0	0	4	0	0	0	0	0	1815.8304		1815.8304	24	75.6596	-0.4585
0	0	5	0	0	0	0	0	1793.5646		1793.5646	24	74.7319	-1.3863
4								205.1490					
0	0	0	1	0	0	0	0	4575.8851		4575.8851	60	76.2648	0.1466
0	0	0	2	0	0	0	0	4558.2912		4558.2912	60	75.9715	-0.1486
1								2.5795					
1	1	0	0	0	0	0	0	675.3637		675.3637	10	67.5364	-8.5818
1	2	0	0	0	0	0	0	832.9194		832.9194	10	83.2919	7.1738
1	3	0	0	0	0	0	0	985.8471		985.8471	10	98.5847	22.4686
2	1	0	0	0	0	0	0	612.0061		612.0061	10	61.2006	-14.9175
2	2	0	0	0	0	0	0	753.6544		753.6544	10	75.3654	-0.7527
2	3	0	0	0	0	0	0	936.4441		936.4441	10	93.6444	17.5263
3	1	0	0	0	0	0	0	581.6777		581.6777	10	58.1678	-17.9504
3	2	0	0	0	0	0	0	727.3238		727.3238	10	72.7324	-3.3858
3	3	0	0	0	0	0	0	883.5244		883.5244	10	88.3524	12.2343
4	1	0	0	0	0	0	0	560.7586		560.7586	10	56.0759	-20.0423
4	2	0	0	0	0	0	0	712.6348		712.6348	10	71.2635	-4.8547
4	3	0	0	0	0	0	0	872.0222		872.0222	10	87.2022	11.0841
6								21916.0114					
1	0	1	0	0	0	0	0	487.7090		487.7090	6	81.2848	5.1667
1	0	2	0	0	0	0	0	510.6812		510.6812	6	85.1135	8.9954
1	0	3	0	0	0	0	0	501.9748		501.9748	6	83.6625	7.5443
1	0	4	0	0	0	0	0	495.8901		495.8901	6	82.6483	6.5302
1	0	5	0	0	0	0	0	497.8751		497.8751	6	82.9792	6.8610
2	0	1	0	0	0	0	0	455.4825		455.4825	6	75.9137	-0.2044
2	0	2	0	0	0	0	0	478.9232		478.9232	6	79.8205	3.7024
2	0	3	0	0	0	0	0	464.8291		464.8291	6	77.4715	1.3534

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE NUM/DE	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	0	4	0	0	0	0	0	452.9446	452.9446	452.9446	6	75.4908	-0.8274
2	0	5	0	0	0	0	0	449.9252	449.9252	449.9252	6	74.9875	-1.1306
3	0	1	0	0	0	0	0	437.8903	437.8903	437.8903	6	72.9817	-3.1364
3	0	2	0	0	0	0	0	452.4006	452.4006	452.4006	6	75.4001	-0.7180
3	0	3	0	0	0	0	0	437.5037	437.5037	437.5037	6	72.9173	-3.2009
3	0	4	0	0	0	0	0	439.2315	439.2315	439.2315	6	73.2052	-2.9129
3	0	5	0	0	0	0	0	425.4998	425.4998	425.4998	6	70.9166	-5.2013
4	0	1	0	0	0	0	0	426.5120	426.5120	426.5120	6	71.0853	-5.0328
4	0	2	0	0	0	0	0	442.1631	442.1631	442.1631	6	73.6938	-2.4243
4	0	3	0	0	0	0	0	428.7118	428.7118	428.7118	6	71.4520	-4.6662
4	0	4	0	0	0	0	0	427.7642	427.7642	427.7642	6	71.2940	-4.8241
4	0	5	0	0	0	0	0	420.2645	420.2645	420.2645	6	70.0441	-6.0741
12								2644.7023					
1	0	0	1	0	0	0	0	1245.5180	1245.5180	1245.5180	15	83.0345	8.9164
1	0	0	2	0	0	0	0	1248.6122	1248.6122	1248.6122	15	83.2408	7.1227
2	0	0	1	0	0	0	0	1153.4797	1153.4797	1153.4797	15	76.8986	0.7805
2	0	0	2	0	0	0	0	1148.6249	1148.6249	1148.6249	15	76.5750	0.4569
3	0	0	1	0	0	0	0	1101.9978	1101.9978	1101.9978	15	73.4665	-2.6516
3	0	0	2	0	0	0	0	1090.5281	1090.5281	1090.5281	15	72.7019	-3.4163
4	0	0	1	0	0	0	0	1074.8896	1074.8896	1074.8896	15	71.6593	-4.4388
4	0	0	2	0	0	0	0	1070.5260	1070.5260	1070.5260	15	71.3684	-4.7497
3								2407.9510					
0	1	1	0	0	0	0	0	470.0068	470.0068	470.0068	8	58.7508	-17.3673
0	1	2	0	0	0	0	0	506.4751	506.4751	506.4751	8	63.3094	-12.8087
0	1	3	0	0	0	0	0	485.8310	485.8310	485.8310	8	60.7289	-15.3893
0	1	4	0	0	0	0	0	488.5804	488.5804	488.5804	8	61.0725	-15.0456
0	1	5	0	0	0	0	0	478.9128	478.9128	478.9128	8	59.8641	-16.2540
0	2	1	0	0	0	0	0	605.6054	605.6054	605.6054	8	75.7007	-0.4175
0	2	2	0	0	0	0	0	628.6076	628.6076	628.6076	8	76.5759	2.4578
0	2	3	0	0	0	0	0	610.6238	610.6238	610.6238	8	76.3280	0.2098
0	2	4	0	0	0	0	0	593.7210	593.7210	593.7210	8	74.2151	-1.9030
0	2	5	0	0	0	0	0	587.9746	587.9746	587.9746	8	73.4968	-2.6213
0	3	1	0	0	0	0	0	731.9816	731.9816	731.9816	8	91.4977	15.3796
0	3	2	0	0	0	0	0	749.0854	749.0854	749.0854	8	93.6357	17.5175
0	3	3	0	0	0	0	0	736.5646	736.5646	736.5646	8	92.0706	15.9524
0	3	4	0	0	0	0	0	733.5290	733.5290	733.5290	8	91.6911	15.5730
0	3	5	0	0	0	0	0	726.6772	726.6772	726.6772	8	90.8346	14.7165
8								19734.4038					
0	1	0	1	0	0	0	0	1213.4570	1213.4570	1213.4570	20	60.6728	-15.4453
0	1	0	2	0	0	0	0	1216.3491	1216.3491	1216.3491	20	60.8175	-15.3007
0	2	0	1	0	0	0	0	1516.8687	1516.8687	1516.8687	20	75.8434	-0.2747
0	2	0	2	0	0	0	0	1509.6637	1509.6637	1509.6637	20	75.4832	-0.6350
0	3	0	1	0	0	0	0	1845.5594	1845.5594	1845.5594	20	92.2780	16.1598
0	3	0	2	0	0	0	0	1832.2784	1832.2784	1832.2784	20	91.6139	15.4958
2								19486.1176					
0	0	1	1	0	0	0	0	903.5452	903.5452	903.5452	12	75.2954	-0.8227
0	0	1	2	0	0	0	0	904.0485	904.0485	904.0485	12	75.3374	-0.7808
0	0	2	1	0	0	0	0	946.5640	946.5640	946.5640	12	78.8803	2.7622
0	0	2	2	0	0	0	0	937.6041	937.6041	937.6041	12	78.1337	2.0155
0	0	3	1	0	0	0	0	915.4233	915.4233	915.4233	12	76.2853	0.1671
0	0	3	2	0	0	0	0	917.5961	917.5961	917.5961	12	76.4663	0.3482
0	0	4	1	0	0	0	0	909.0964	909.0964	909.0964	12	75.7580	-0.3601
0	0	4	2	0	0	0	0	906.7340	906.7340	906.7340	12	75.5612	-0.5570
0	0	5	1	0	0	0	0	901.2562	901.2562	901.2562	12	75.1047	-1.0135
0	0	5	2	0	0	0	0	892.3084	892.3084	892.3084	12	74.3590	-1.7591
4								212.2698					

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE NUM/8Q	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	I	C	D	E	F	G	H						
1	1	1	0	0	0	0	0	131.3904		131.3904	1	65.4952	-10.4229
1	1	2	0	0	0	0	0	140.8945		140.8945	2	70.4472	-5.6709
1	1	3	0	0	0	0	0	133.7975		133.7975	2	66.8987	-9.2194
1	1	4	0	0	0	0	0	134.7360		134.7360	2	67.3680	-8.7501
1	1	5	0	0	0	0	0	134.5453		134.5453	2	67.2726	-8.8455
1	2	1	0	0	0	0	0	159.8603		159.8603	2	79.9301	3.8120
1	2	2	0	0	0	0	0	170.6213		170.6213	2	85.3106	9.1925
1	2	3	0	0	0	0	0	169.0922		169.0922	2	84.5461	8.4280
1	2	4	0	0	0	0	0	166.3807		166.3807	2	83.1903	7.0722
1	2	5	0	0	0	0	0	166.9649		166.9649	2	83.4824	7.3643
1	3	1	0	0	0	0	0	196.4583		196.4583	2	98.2291	22.1110
1	3	2	0	0	0	0	0	199.1654		199.1654	2	99.5827	23.4646
1	3	3	0	0	0	0	0	199.0851		199.0851	2	99.5425	23.4244
1	3	4	0	0	0	0	0	194.7734		194.7734	2	97.3867	21.2686
1	3	5	0	0	0	0	0	196.3649		196.3649	2	98.1824	22.0643
2	1	1	0	0	0	0	0	116.9363		116.9363	2	58.4681	-17.6500
2	1	2	0	0	0	0	0	127.9376		127.9376	2	63.9688	-12.1493
2	1	3	0	0	0	0	0	124.1851		124.1851	2	62.0925	-14.0256
2	1	4	0	0	0	0	0	123.1184		123.1184	2	61.5592	-14.5589
2	1	5	0	0	0	0	0	119.8287		119.8287	2	59.9143	-16.2038
2	2	1	0	0	0	0	0	152.3561		152.3561	2	76.1780	0.0599
2	2	2	0	0	0	0	0	159.1536		159.1536	2	79.5768	3.4587
2	2	3	0	0	0	0	0	153.2027		153.2027	2	76.6013	0.4832
2	2	4	0	0	0	0	0	143.4738		143.4738	2	71.7369	-4.3812
2	2	5	0	0	0	0	0	145.4682		145.4682	2	72.7341	-3.3840
2	3	1	0	0	0	0	0	186.1901		186.1901	2	93.0950	16.9769
2	3	2	0	0	0	0	0	191.8320		191.8320	2	95.9160	19.7979
2	3	3	0	0	0	0	0	187.4413		187.4413	2	93.7206	17.6025
2	3	4	0	0	0	0	0	186.3524		186.3524	2	93.1762	17.0581
2	3	5	0	0	0	0	0	184.6283		184.6283	2	92.3141	16.1960
3	1	1	0	0	0	0	0	112.2240		112.2240	2	56.1120	-20.0061
3	1	2	0	0	0	0	0	121.2489		121.2489	2	60.6244	-15.4937
3	1	3	0	0	0	0	0	114.7623		114.7623	2	57.3811	-18.7370
3	1	4	0	0	0	0	0	118.6035		118.6035	2	59.3017	-18.8164
3	1	5	0	0	0	0	0	114.8390		114.8390	2	57.4195	-18.6986
3	2	1	0	0	0	0	0	149.5037		149.5037	2	74.7518	-1.3663
3	2	2	0	0	0	0	0	150.1640		150.1640	2	75.0820	-1.0361
3	2	3	0	0	0	0	0	146.8257		146.8257	2	73.4128	-2.7053
3	2	4	0	0	0	0	0	143.4415		143.4415	2	71.7207	-4.3974
3	2	5	0	0	0	0	0	137.3889		137.3889	2	68.6944	-7.4237
3	3	1	0	0	0	0	0	176.1626		176.1626	2	88.0813	11.9632
3	3	2	0	0	0	0	0	180.9877		180.9877	2	90.4938	14.3757
3	3	3	0	0	0	0	0	175.9157		175.9157	2	87.9578	11.8397
3	3	4	0	0	0	0	0	177.1865		177.1865	2	88.5932	12.4751
3	3	5	0	0	0	0	0	173.2719		173.2719	2	86.6359	10.5178
4	1	1	0	0	0	0	0	109.4561		109.4561	2	54.7280	-21.3901
4	1	2	0	0	0	0	0	116.3941		116.3941	2	58.1970	-17.9211
4	1	3	0	0	0	0	0	113.0861		113.0861	2	56.5430	-19.5751
4	1	4	0	0	0	0	0	112.1225		112.1225	2	56.0612	-20.0569
4	1	5	0	0	0	0	0	109.6998		109.6998	2	54.8499	-21.2682
4	2	1	0	0	0	0	0	143.8853		143.8853	2	71.9426	-4.1755
4	2	2	0	0	0	0	0	148.6687		148.6687	2	74.3343	-1.7838
4	2	3	0	0	0	0	0	141.5032		141.5032	2	70.7516	-5.3665
4	2	4	0	0	0	0	0	140.4250		140.4250	2	70.2125	-5.9054
4	2	5	0	0	0	0	0	138.1526		138.1526	2	69.0763	-7.0418
4	3	1	0	0	0	0	0	173.1706		173.1706	2	86.5853	10.4672
4	3	2	0	0	0	0	0	177.1003		177.1003	2	88.5501	12.4320
4	3	3	0	0	0	0	0	174.1225		174.1225	2	87.0612	10.9431
4	3	4	0	0	0	0	0	175.2167		175.2167	2	87.6083	11.4902
4	3	5	0	0	0	0	0	172.4121		172.4121	2	86.2060	10.0879
24								22263.1481					
1	1	0	1	0	0	0	0	338.7594		338.7594	8	42.3449	-6.7821
1	1	0	2	0	0	0	0	338.6083		338.6083	8	42.3260	-6.8045
1	2	0	1	0	0	0	0	414.5373		414.5373	8	51.8171	6.7099

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/NO	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	2	0	2	0	0	0	0	418.3821		418.3821	5	83.6764	7.5583
1	3	0	1	0	0	0	0	494.2253		494.2253	5	98.8451	22.7269
1	3	0	2	0	0	0	0	491.6218		491.6218	5	98.3244	22.2062
2	1	0	1	0	0	0	0	306.7391		306.7391	5	61.3478	-14.7703
2	1	0	2	0	0	0	0	305.2670		305.2670	5	61.0534	-15.0647
2	2	0	1	0	0	0	0	377.5674		377.5674	5	75.5135	-0.6047
2	2	0	2	0	0	0	0	376.0870		376.0870	5	75.2174	-0.9007
2	3	0	1	0	0	0	0	469.1732		469.1732	5	93.8346	17.7165
2	3	0	2	0	0	0	0	467.2709		467.2709	5	93.4542	17.3360
3	1	0	1	0	0	0	0	290.8394		290.8394	5	58.1679	-17.9503
3	1	0	2	0	0	0	0	290.8383		290.8383	5	58.1677	-17.9505
3	2	0	1	0	0	0	0	365.9532		365.9532	5	73.1906	-2.9275
3	2	0	2	0	0	0	0	361.3706		361.3706	5	72.2741	-3.8440
3	3	0	1	0	0	0	0	445.2052		445.2052	5	89.0410	12.9229
3	3	0	2	0	0	0	0	438.3192		438.3192	5	87.6638	11.5457
4	1	0	1	0	0	0	0	279.1231		279.1231	5	55.8246	-20.2935
4	1	0	2	0	0	0	0	281.6355		281.6355	5	56.3271	-19.7910
4	2	0	1	0	0	0	0	358.8108		358.8108	5	71.7622	-4.3560
4	2	0	2	0	0	0	0	353.8240		353.8240	5	70.7648	-5.3533
4	3	0	1	0	0	0	0	436.9557		436.9557	5	87.3911	11.2730
4	3	0	2	0	0	0	0	435.0665		435.0665	5	87.0133	10.8952
6								21929.6252					
1	0	1	1	0	0	0	0	240.2338		240.2338	3	80.0779	3.9598
1	0	1	2	0	0	0	0	247.4752		247.4752	3	82.4917	6.3736
1	0	2	1	0	0	0	0	254.8481		254.8481	3	84.9494	8.8312
1	0	2	2	0	0	0	0	255.8331		255.8331	3	85.2777	9.1596
1	0	3	1	0	0	0	0	251.1124		251.1124	3	83.7041	7.5860
1	0	3	2	0	0	0	0	250.8624		250.8624	3	83.6208	7.5027
1	0	4	1	0	0	0	0	249.0053		249.0053	3	83.0018	6.8836
1	0	4	2	0	0	0	0	246.8848		246.8848	3	82.2949	6.1768
1	0	5	1	0	0	0	0	250.3184		250.3184	3	83.4395	7.3213
1	0	5	2	0	0	0	0	247.5567		247.5567	3	82.5189	6.4008
2	0	1	1	0	0	0	0	229.0727		229.0727	3	76.3576	0.2394
2	0	1	2	0	0	0	0	226.4098		226.4098	3	75.4699	-0.6482
2	0	2	1	0	0	0	0	240.7764		240.7764	3	80.2588	4.1407
2	0	2	2	0	0	0	0	238.1468		238.1468	3	79.3823	3.2641
2	0	3	1	0	0	0	0	233.8066		233.8066	3	77.9355	1.8174
2	0	3	2	0	0	0	0	231.0225		231.0225	3	77.0075	0.8894
2	0	4	1	0	0	0	0	225.7088		225.7088	3	75.2363	-0.8819
2	0	4	2	0	0	0	0	227.2358		227.2358	3	75.7453	-0.3729
2	0	5	1	0	0	0	0	224.1152		224.1152	3	74.7051	-1.4131
2	0	5	2	0	0	0	0	225.8100		225.8100	3	75.2700	-0.8481
3	0	1	1	0	0	0	0	219.7835		219.7835	3	73.2612	-2.8570
3	0	1	2	0	0	0	0	218.1068		218.1068	3	72.7023	-3.4159
3	0	2	1	0	0	0	0	228.1287		228.1287	3	76.0429	-0.0752
3	0	2	2	0	0	0	0	224.2719		224.2719	3	74.7573	-1.3608
3	0	3	1	0	0	0	0	217.8715		217.8715	3	72.6238	-3.4943
3	0	3	2	0	0	0	0	219.6322		219.6322	3	73.2107	-2.9074
3	0	4	1	0	0	0	0	221.0370		221.0370	3	73.6790	-2.4391
3	0	4	2	0	0	0	0	218.1945		218.1945	3	72.7315	-3.3866
3	0	5	1	0	0	0	0	215.1771		215.1771	3	71.7257	-4.3924
3	0	5	2	0	0	0	0	210.3227		210.3227	3	70.1076	-6.0106
4	0	1	1	0	0	0	0	214.4552		214.4552	3	71.4851	-4.6351
4	0	1	2	0	0	0	0	212.0568		212.0568	3	70.6856	-5.4325
4	0	2	1	0	0	0	0	222.8108		222.8108	3	74.2703	-1.8479
4	0	2	2	0	0	0	0	219.3523		219.3523	3	73.1174	-3.0007
4	0	3	1	0	0	0	0	212.6328		212.6328	3	70.8776	-5.2405
4	0	3	2	0	0	0	0	216.0790		216.0790	3	72.0263	-4.0918
4	0	4	1	0	0	0	0	213.3453		213.3453	3	71.1151	-5.0030
4	0	4	2	0	0	0	0	214.4189		214.4189	3	71.4730	-4.6452
4	0	5	1	0	0	0	0	211.6455		211.6455	3	70.5485	-5.5696
4	0	5	2	0	0	0	0	208.6190		208.6190	3	69.5397	-6.5785
12								2675.5171					

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/80	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
0	1	1	1	0	0	0	0	235.7609		235.7609	4	58.9402	-17.1779
0	1	1	2	0	0	0	0	234.2459		234.2459	4	58.5615	-17.5567
0	1	2	1	0	0	0	0	249.6916		249.6916	4	62.4229	-13.6952
0	1	2	2	0	0	0	0	256.7835		256.7835	4	64.1959	-11.9223
0	1	3	1	0	0	0	0	241.1264		241.1264	4	60.2816	-15.8365
0	1	3	2	0	0	0	0	244.7046		244.7046	4	61.1761	-14.9420
0	1	4	1	0	0	0	0	247.3183		247.3183	4	61.8296	-14.2886
0	1	4	2	0	0	0	0	241.2621		241.2621	4	60.3155	-15.8026
0	1	5	1	0	0	0	0	239.5598		239.5598	4	59.8899	-16.2282
0	1	5	2	0	0	0	0	239.3530		239.3530	4	59.8382	-16.2799
0	2	1	1	0	0	0	0	300.5800		300.5800	4	75.1450	-0.9731
0	2	1	2	0	0	0	0	305.0254		305.0254	4	76.2563	0.1382
0	2	2	1	0	0	0	0	320.4742		320.4742	4	80.1185	4.0004
0	2	2	2	0	0	0	0	308.1334		308.1334	4	77.0333	0.9152
0	2	3	1	0	0	0	0	308.2338		308.2338	4	77.0584	0.9403
0	2	3	2	0	0	0	0	302.3900		302.3900	4	75.5975	-0.5206
0	2	4	1	0	0	0	0	294.0200		294.0200	4	73.5050	-2.6131
0	2	4	2	0	0	0	0	299.7010		299.7010	4	74.9252	-1.1929
0	2	5	1	0	0	0	0	293.5607		293.5607	4	73.3902	-2.7280
0	2	5	2	0	0	0	0	294.4139		294.4139	4	73.6035	-2.5147
0	3	1	1	0	0	0	0	367.2043		367.2043	4	91.8011	15.6629
0	3	1	2	0	0	0	0	364.7773		364.7773	4	91.1943	15.0762
0	3	2	1	0	0	0	0	376.3982		376.3982	4	94.0995	17.9814
0	3	2	2	0	0	0	0	372.6872		372.6872	4	93.1718	17.0537
0	3	3	1	0	0	0	0	366.0631		366.0631	4	91.5158	15.3976
0	3	3	2	0	0	0	0	370.5015		370.5015	4	92.6254	16.5072
0	3	4	1	0	0	0	0	367.7581		367.7581	4	91.9395	15.8214
0	3	4	2	0	0	0	0	365.7709		365.7709	4	91.4427	15.3246
0	3	5	1	0	0	0	0	368.1357		368.1357	4	92.0339	15.9158
0	3	5	2	0	0	0	0	358.5415		358.5415	4	89.6354	13.5172
8									19793.9890				
1	1	1	1	0	0	0	0	65.8654		65.8654	1	65.8654	-10.2527
1	1	1	2	0	0	0	0	65.5250		65.5250	1	65.5250	-10.5931
1	1	2	1	0	0	0	0	69.1858		69.1858	1	69.1858	-6.9323
1	1	2	2	0	0	0	0	71.7087		71.7087	1	71.7087	-4.4094
1	1	3	1	0	0	0	0	66.5808		66.5808	1	66.5808	-9.5373
1	1	3	2	0	0	0	0	67.2167		67.2167	1	67.2167	-8.9014
1	1	4	1	0	0	0	0	67.8149		67.8149	1	67.8149	-8.3032
1	1	4	2	0	0	0	0	66.9211		66.9211	1	66.9211	-9.1970
1	1	5	1	0	0	0	0	67.3085		67.3085	1	67.3085	-8.8096
1	1	5	2	0	0	0	0	67.2368		67.2368	1	67.2368	-8.8813
1	2	1	1	0	0	0	0	76.5000		76.5000	1	76.5000	0.3819
1	2	1	2	0	0	0	0	83.3603		83.3603	1	83.3603	7.2422
1	2	2	1	0	0	0	0	85.8554		85.8554	1	85.8554	9.7373
1	2	2	2	0	0	0	0	84.7659		84.7659	1	84.7659	8.4678
1	2	3	1	0	0	0	0	84.7459		84.7459	1	84.7459	8.6278
1	2	3	2	0	0	0	0	84.3463		84.3463	1	84.3463	8.2282
1	2	4	1	0	0	0	0	83.1661		83.1661	1	83.1661	7.0480
1	2	4	2	0	0	0	0	83.2146		83.2146	1	83.2146	7.0965
1	2	5	1	0	0	0	0	84.2699		84.2699	1	84.2699	8.1518
1	2	5	2	0	0	0	0	82.6950		82.6950	1	82.6950	6.5769
1	3	1	1	0	0	0	0	97.8684		97.8684	1	97.8684	21.7503
1	3	1	2	0	0	0	0	98.5899		98.5899	1	98.5899	22.4718
1	3	2	1	0	0	0	0	99.8069		99.8069	1	99.8069	23.6888
1	3	2	2	0	0	0	0	99.3985		99.3985	1	99.3985	23.2404
1	3	3	1	0	0	0	0	99.7857		99.7857	1	99.7857	23.6676
1	3	3	2	0	0	0	0	99.2994		99.2994	1	99.2994	23.1813
1	3	4	1	0	0	0	0	98.0243		98.0243	1	98.0243	21.9062
1	3	4	2	0	0	0	0	96.7491		96.7491	1	96.7491	20.6310
1	3	5	1	0	0	0	0	98.7400		98.7400	1	98.7400	22.6219
1	3	5	2	0	0	0	0	97.8249		97.8249	1	97.8249	21.9889
2	1	1	1	0	0	0	0	59.4429		59.4429	1	59.4429	-16.6752
2	1	1	2	0	0	0	0	57.4934		57.4934	1	57.4934	-16.8447

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/AG	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	E	C	D	E	F	G	H						
2	1	2	1	0	0	0	0	63.9027	63.9027	63.9027	1	63.9027	-12.2154
2	1	2	2	0	0	0	0	64.0349	64.0349	64.0349	1	64.0349	-12.0832
2	1	3	1	0	0	0	0	61.0890	61.0890	61.0890	1	61.0890	-15.0291
2	1	3	2	0	0	0	0	63.0961	63.0961	63.0961	1	63.0961	-13.0220
2	1	4	1	0	0	0	0	62.0379	62.0379	62.0379	1	62.0379	-14.0802
2	1	4	2	0	0	0	0	61.0805	61.0805	61.0805	1	61.0805	-15.0376
2	1	5	1	0	0	0	0	60.2666	60.2666	60.2666	1	60.2666	-15.8515
2	1	5	2	0	0	0	0	59.5621	59.5621	59.5621	1	59.5621	-16.5560
2	2	1	1	0	0	0	0	76.1521	76.1521	76.1521	1	76.1521	0.0340
2	2	1	2	0	0	0	0	76.2040	76.2040	76.2040	1	76.2040	0.0859
2	2	2	1	0	0	0	0	81.0017	81.0017	81.0017	1	81.0017	4.8836
2	2	2	2	0	0	0	0	78.1519	78.1519	78.1519	1	78.1519	2.0338
2	2	3	1	0	0	0	0	79.1509	79.1509	79.1509	1	79.1509	3.0328
2	2	3	2	0	0	0	0	74.0518	74.0518	74.0518	1	74.0518	-2.0663
2	2	4	1	0	0	0	0	70.3185	70.3185	70.3185	1	70.3185	-5.7996
2	2	4	2	0	0	0	0	73.1553	73.1553	73.1553	1	73.1553	-2.9628
2	2	5	1	0	0	0	0	70.9442	70.9442	70.9442	1	70.9442	-5.1739
2	2	5	2	0	0	0	0	74.5240	74.5240	74.5240	1	74.5240	-1.5941
2	3	1	1	0	0	0	0	93.4777	93.4777	93.4777	1	93.4777	17.3596
2	3	1	2	0	0	0	0	92.7124	92.7124	92.7124	1	92.7124	16.5943
2	3	2	1	0	0	0	0	95.8720	95.8720	95.8720	1	95.8720	19.7539
2	3	2	2	0	0	0	0	95.9600	95.9600	95.9600	1	95.9600	19.8419
2	3	3	1	0	0	0	0	93.5667	93.5667	93.5667	1	93.5667	17.4486
2	3	3	2	0	0	0	0	93.8746	93.8746	93.8746	1	93.8746	17.7565
2	3	4	1	0	0	0	0	93.3524	93.3524	93.3524	1	93.3524	17.2343
2	3	4	2	0	0	0	0	93.0000	93.0000	93.0000	1	93.0000	16.8819
2	3	5	1	0	0	0	0	92.9044	92.9044	92.9044	1	92.9044	16.7863
2	3	5	2	0	0	0	0	91.7239	91.7239	91.7239	1	91.7239	15.6058
3	1	1	1	0	0	0	0	56.4770	56.4770	56.4770	1	56.4770	-19.6411
3	1	1	2	0	0	0	0	55.7470	55.7470	55.7470	1	55.7470	-20.3711
3	1	2	1	0	0	0	0	59.9789	59.9789	59.9789	1	59.9789	-16.1392
3	1	2	2	0	0	0	0	61.2700	61.2700	61.2700	1	61.2700	-14.8481
3	1	3	1	0	0	0	0	56.6066	56.6066	56.6066	1	56.6066	-19.5115
3	1	3	2	0	0	0	0	58.1557	58.1557	58.1557	1	58.1557	-17.9624
3	1	4	1	0	0	0	0	60.3911	60.3911	60.3911	1	60.3911	-15.7270
3	1	4	2	0	0	0	0	58.2124	58.2124	58.2124	1	58.2124	-17.9057
3	1	5	1	0	0	0	0	57.3858	57.3858	57.3858	1	57.3858	-18.7323
3	1	5	2	0	0	0	0	57.4532	57.4532	57.4532	1	57.4532	-18.6649
3	2	1	1	0	0	0	0	75.1513	75.1513	75.1513	1	75.1513	-0.9668
3	2	1	2	0	0	0	0	74.3524	74.3524	74.3524	1	74.3524	-1.7657
3	2	2	1	0	0	0	0	77.1827	77.1827	77.1827	1	77.1827	1.0646
3	2	2	2	0	0	0	0	72.9813	72.9813	72.9813	1	72.9813	-3.1368
3	2	3	1	0	0	0	0	73.7649	73.7649	73.7649	1	73.7649	-2.3532
3	2	3	2	0	0	0	0	73.0608	73.0608	73.0608	1	73.0608	-3.0573
3	2	4	1	0	0	0	0	70.8543	70.8543	70.8543	1	70.8543	-5.2638
3	2	4	2	0	0	0	0	72.5872	72.5872	72.5872	1	72.5872	-3.5309
3	2	5	1	0	0	0	0	69.0000	69.0000	69.0000	1	69.0000	-7.1181
3	2	5	2	0	0	0	0	68.3889	68.3889	68.3889	1	68.3889	-7.7292
3	3	1	1	0	0	0	0	88.1552	88.1552	88.1552	1	88.1552	12.0371
3	3	1	2	0	0	0	0	88.0074	88.0074	88.0074	1	88.0074	11.8893
3	3	2	1	0	0	0	0	90.9671	90.9671	90.9671	1	90.9671	14.8490
3	3	2	2	0	0	0	0	90.0206	90.0206	90.0206	1	90.0206	13.9025
3	3	3	1	0	0	0	0	87.5000	87.5000	87.5000	1	87.5000	11.3819
3	3	3	2	0	0	0	0	88.4157	88.4157	88.4157	1	88.4157	12.2976
3	3	4	1	0	0	0	0	89.7916	89.7916	89.7916	1	89.7916	13.6735
3	3	4	2	0	0	0	0	87.3949	87.3949	87.3949	1	87.3949	11.2768
3	3	5	1	0	0	0	0	88.7913	88.7913	88.7913	1	88.7913	12.6732
3	3	5	2	0	0	0	0	84.4806	84.4806	84.4806	1	84.4806	8.3625
4	1	1	1	0	0	0	0	53.9756	53.9756	53.9756	1	53.9756	-22.1425
4	1	1	2	0	0	0	0	55.4805	55.4805	55.4805	1	55.4805	-20.6376
4	1	2	1	0	0	0	0	56.6242	56.6242	56.6242	1	56.6242	-19.4939
4	1	2	2	0	0	0	0	59.7699	59.7699	59.7699	1	59.7699	-16.3482
4	1	3	1	0	0	0	0	56.8500	56.8500	56.8500	1	56.8500	-19.2681
4	1	3	2	0	0	0	0	56.2361	56.2361	56.2361	1	56.2361	-19.8820
4	1	4	1	0	0	0	0	57.0744	57.0744	57.0744	1	57.0744	-19.0437
4	1	4	2	0	0	0	0	55.0481	55.0481	55.0481	1	55.0481	-21.0700

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SOURCE								SUM X1	CRUDE SUM/BQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
4	1	5	1	0	0	0	0	54.5989		54.5989	1	54.5989	-21.5192
4	1	5	2	0	0	0	0	55.1009		55.1009	1	55.1009	-21.0172
4	2	1	1	0	0	0	0	72.7766		72.7766	1	72.7766	-3.3415
4	2	1	2	0	0	0	0	71.1087		71.1087	1	71.1087	-3.0094
4	2	2	1	0	0	0	0	76.4344		76.4344	1	76.4344	0.3163
4	2	2	2	0	0	0	0	72.2343		72.2343	1	72.2343	-3.8838
4	2	3	1	0	0	0	0	70.5721		70.5721	1	70.5721	-5.5460
4	2	3	2	0	0	0	0	70.9311		70.9311	1	70.9311	-5.1870
4	2	4	1	0	0	0	0	69.6811		69.6811	1	69.6811	-6.4370
4	2	4	2	0	0	0	0	70.7439		70.7439	1	70.7439	-5.3742
4	2	5	1	0	0	0	0	69.3466		69.3466	1	69.3466	-6.7715
4	2	5	2	0	0	0	0	68.8060		68.8060	1	68.8060	-7.3121
4	3	1	1	0	0	0	0	87.7030		87.7030	1	87.7030	11.5849
4	3	1	2	0	0	0	0	85.4676		85.4676	1	85.4676	9.3495
4	3	2	1	0	0	0	0	89.7522		89.7522	1	89.7522	13.6341
4	3	2	2	0	0	0	0	87.3481		87.3481	1	87.3481	11.2300
4	3	3	1	0	0	0	0	85.2107		85.2107	1	85.2107	9.0926
4	3	3	2	0	0	0	0	88.9118		88.9118	1	88.9118	12.7937
4	3	4	1	0	0	0	0	86.5898		86.5898	1	86.5898	10.4717
4	3	4	2	0	0	0	0	88.6269		88.6269	1	88.6269	12.5088
4	3	5	1	0	0	0	0	87.7000		87.7000	1	87.7000	11.5819
4	3	5	2	0	0	0	0	84.7121		84.7121	1	84.7121	8.5940
24								22394.5875					

TABLE 8.2-12. TELPS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE (Cont)

SUMMARY OF ANALYSIS								TELS P-LEG PERFORMANCE ANALYSIS FOR SEEBECK VOLTAGE			
SOURCE								DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE	
A	B	C	D	E	F	G	H				
1	0	0	0	0	0	0	0	AA	3	2401.8264	800.6088 *
0	1	0	0	0	0	0	0	BB	2	19482.2010	9741.1005 *
0	0	1	0	0	0	0	0	CC	4	205.1490	51.2872 *
0	0	0	1	0	0	0	0	DD	1	2.5795	2.5795
1	1	0	0	0	0	0	0	AB	6	31.9839	5.3307
1	0	1	0	0	0	0	0	AC	12	37.7269	3.1439
1	0	0	1	0	0	0	0	AD	3	3.5451	1.1817
0	1	1	0	0	0	0	0	BC	8	47.0538	5.8817
0	1	0	1	0	0	0	0	BD	2	3.3370	1.6685
0	0	1	1	0	0	0	0	CD	4	4.5412	1.1353
1	1	1	0	0	0	0	0	ABC	24	57.2071	2.3836
1	1	0	1	0	0	0	0	ABD	6	4.1522	0.6920
1	0	1	1	0	0	0	0	ACD	12	20.1490	1.6791
0	1	1	1	0	0	0	0	BCD	8	49.1275	6.1409
1	1	1	1	0	0	0	0	ABCD	24	44.0079	1.8337
RESIDUAL								0	0.0211	0.0	

* 5% SIGNIFICANT BASED ON ERROR MS = 3.2378 W/60 df

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER

ANALYSIS OF VARIANCE								TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER			
A	B	C	D	E	F	G	H	X1	X2	X1X2	N
1	1	1	1	0	0	0	0	0.09349	0.09349	0.00874	1
1	1	1	2	0	0	0	0	0.09810	0.09810	0.00962	1
1	1	2	1	0	0	0	0	0.09181	0.09181	0.00843	1
1	1	2	2	0	0	0	0	0.10365	0.10365	0.01074	1
1	1	3	1	0	0	0	0	0.09475	0.09475	0.00898	1
1	1	3	2	0	0	0	0	0.08790	0.08790	0.00773	1
1	1	4	1	0	0	0	0	0.09352	0.09352	0.00875	1
1	1	4	2	0	0	0	0	0.09169	0.09169	0.00841	1
1	1	5	1	0	0	0	0	0.09406	0.09406	0.00885	1
1	1	5	2	0	0	0	0	0.09123	0.09123	0.00832	1
1	2	1	1	0	0	0	0	0.16000	0.16000	0.02560	1
1	2	1	2	0	0	0	0	0.13458	0.13458	0.01811	1
1	2	2	1	0	0	0	0	0.13063	0.13063	0.01706	1
1	2	2	2	0	0	0	0	0.13143	0.13143	0.01727	1
1	2	3	1	0	0	0	0	0.13346	0.13346	0.01781	1
1	2	3	2	0	0	0	0	0.13473	0.13473	0.01815	1
1	2	4	1	0	0	0	0	0.13440	0.13440	0.01806	1
1	2	4	2	0	0	0	0	0.13223	0.13223	0.01748	1
1	2	5	1	0	0	0	0	0.13844	0.13844	0.01917	1
1	2	5	2	0	0	0	0	0.12365	0.12365	0.01529	1
1	3	1	1	0	0	0	0	0.18010	0.18010	0.03244	1
1	3	1	2	0	0	0	0	0.17351	0.17351	0.03011	1
1	3	2	1	0	0	0	0	0.16565	0.16565	0.02744	1
1	3	2	2	0	0	0	0	0.17177	0.17177	0.02950	1
1	3	3	1	0	0	0	0	0.16997	0.16997	0.02869	1
1	3	3	2	0	0	0	0	0.17043	0.17043	0.02905	1
1	3	4	1	0	0	0	0	0.17275	0.17275	0.02984	1
1	3	4	2	0	0	0	0	0.16377	0.16377	0.02682	1
1	3	5	1	0	0	0	0	0.16910	0.16910	0.02859	1
1	3	5	2	0	0	0	0	0.16887	0.16887	0.02852	1
2	1	1	1	0	0	0	0	0.10983	0.10983	0.01206	1
2	1	1	2	0	0	0	0	0.10327	0.10327	0.01066	1
2	1	2	1	0	0	0	0	0.09501	0.09501	0.00903	1
2	1	2	2	0	0	0	0	0.09528	0.09528	0.00908	1
2	1	3	1	0	0	0	0	0.10528	0.10528	0.01108	1
2	1	3	2	0	0	0	0	0.09651	0.09651	0.00931	1
2	1	4	1	0	0	0	0	0.09688	0.09688	0.00939	1
2	1	4	2	0	0	0	0	0.09836	0.09836	0.00967	1
2	1	5	1	0	0	0	0	0.10114	0.10114	0.01023	1
2	1	5	2	0	0	0	0	0.10944	0.10944	0.01198	1
2	2	1	1	0	0	0	0	0.15141	0.15141	0.02292	1
2	2	1	2	0	0	0	0	0.14151	0.14151	0.02003	1
2	2	2	1	0	0	0	0	0.13982	0.13982	0.01955	1
2	2	2	2	0	0	0	0	0.14540	0.14540	0.02114	1
2	2	3	1	0	0	0	0	0.14053	0.14053	0.01975	1
2	2	3	2	0	0	0	0	0.14329	0.14329	0.02053	1
2	2	4	1	0	0	0	0	0.16637	0.16637	0.02768	1
2	2	4	2	0	0	0	0	0.15111	0.15111	0.02283	1
2	2	5	1	0	0	0	0	0.16693	0.16693	0.02787	1
2	2	5	2	0	0	0	0	0.14179	0.14179	0.02010	1
2	3	1	1	0	0	0	0	0.19524	0.19524	0.03812	1
2	3	1	2	0	0	0	0	0.17816	0.17816	0.03174	1
2	3	2	1	0	0	0	0	0.17882	0.17882	0.03198	1
2	3	2	2	0	0	0	0	0.17230	0.17230	0.02969	1
2	3	3	1	0	0	0	0	0.20253	0.20253	0.04102	1
2	3	3	2	0	0	0	0	0.18802	0.18802	0.03725	1
2	3	4	1	0	0	0	0	0.18447	0.18447	0.03640	1
2	3	4	2	0	0	0	0	0.17500	0.17500	0.03344	1

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

A	B	C	D	E	F	G	H	X1	X2	X1X2	N
2	3	5	1	0	0	0	0	0.18560	0.18560	0.03445	1
2	3	5	2	0	0	0	0	0.19137	0.19137	0.03662	1
3	1	1	1	0	0	0	0	0.09792	0.09792	0.00959	1
3	1	1	2	0	0	0	0	0.08942	0.08942	0.00800	1
3	1	2	1	0	0	0	0	0.09520	0.09520	0.00906	1
3	1	2	2	0	0	0	0	0.10060	0.10060	0.01012	1
3	1	3	1	0	0	0	0	0.10266	0.10266	0.01054	1
3	1	3	2	0	0	0	0	0.10263	0.10263	0.01053	1
3	1	4	1	0	0	0	0	0.09418	0.09418	0.00887	1
3	1	4	2	0	0	0	0	0.09893	0.09893	0.00979	1
3	1	5	1	0	0	0	0	0.09828	0.09828	0.00966	1
3	1	5	2	0	0	0	0	0.10053	0.10053	0.01011	1
3	2	1	1	0	0	0	0	0.13198	0.13198	0.01742	1
3	2	1	2	0	0	0	0	0.14785	0.14785	0.02186	1
3	2	2	1	0	0	0	0	0.14920	0.14920	0.02226	1
3	2	2	2	0	0	0	0	0.14870	0.14870	0.02211	1
3	2	3	1	0	0	0	0	0.14159	0.14159	0.02005	1
3	2	3	2	0	0	0	0	0.14055	0.14055	0.01975	1
3	2	4	1	0	0	0	0	0.13613	0.13613	0.01853	1
3	2	4	2	0	0	0	0	0.14946	0.14946	0.02234	1
3	2	5	1	0	0	0	0	0.16500	0.16500	0.02722	1
3	2	5	2	0	0	0	0	0.14281	0.14281	0.02039	1
3	3	1	1	0	0	0	0	0.16041	0.16041	0.02573	1
3	3	1	2	0	0	0	0	0.19444	0.19444	0.03781	1
3	3	2	1	0	0	0	0	0.18772	0.18772	0.03524	1
3	3	2	2	0	0	0	0	0.19451	0.19451	0.03783	1
3	3	3	1	0	0	0	0	0.16800	0.16800	0.02822	1
3	3	3	2	0	0	0	0	0.20086	0.20086	0.04034	1
3	3	4	1	0	0	0	0	0.19569	0.19569	0.03829	1
3	3	4	2	0	0	0	0	0.19905	0.19905	0.03962	1
3	3	5	1	0	0	0	0	0.20491	0.20491	0.04199	1
3	3	5	2	0	0	0	0	0.20223	0.20223	0.04090	1
4	1	1	1	0	0	0	0	0.10046	0.10046	0.01009	1
4	1	1	2	0	0	0	0	0.09247	0.09247	0.00853	1
4	1	2	1	0	0	0	0	0.08499	0.08499	0.00722	1
4	1	2	2	0	0	0	0	0.10534	0.10534	0.01110	1
4	1	3	1	0	0	0	0	0.09740	0.09740	0.00949	1
4	1	3	2	0	0	0	0	0.10194	0.10194	0.01039	1
4	1	4	1	0	0	0	0	0.08384	0.08384	0.00703	1
4	1	4	2	0	0	0	0	0.10045	0.10045	0.01009	1
4	1	5	1	0	0	0	0	0.11122	0.11122	0.01237	1
4	1	5	2	0	0	0	0	0.09985	0.09985	0.00997	1
4	2	1	1	0	0	0	0	0.11034	0.11034	0.01217	1
4	2	1	2	0	0	0	0	0.13715	0.13715	0.01881	1
4	2	2	1	0	0	0	0	0.14431	0.14431	0.02083	1
4	2	2	2	0	0	0	0	0.13922	0.13922	0.01938	1
4	2	3	1	0	0	0	0	0.11239	0.11239	0.01263	1
4	2	3	2	0	0	0	0	0.13967	0.13967	0.01951	1
4	2	4	1	0	0	0	0	0.13164	0.13164	0.01733	1
4	2	4	2	0	0	0	0	0.14068	0.14068	0.01979	1
4	2	5	1	0	0	0	0	0.14991	0.14991	0.02247	1
4	2	5	2	0	0	0	0	0.13406	0.13406	0.01797	1
4	3	1	1	0	0	0	0	0.19008	0.19008	0.03613	1
4	3	1	2	0	0	0	0	0.18866	0.18866	0.03559	1
4	3	2	1	0	0	0	0	0.19769	0.19769	0.03906	1
4	3	2	2	0	0	0	0	0.19395	0.19395	0.03762	1
4	3	3	1	0	0	0	0	0.15436	0.15436	0.02383	1
4	3	3	2	0	0	0	0	0.20174	0.20174	0.04070	1
4	3	4	1	0	0	0	0	0.19451	0.19451	0.03783	1
4	3	4	2	0	0	0	0	0.19774	0.19774	0.03910	1
4	3	5	1	0	0	0	0	0.22030	0.22030	0.04853	1
4	3	5	2	0	0	0	0	0.20893	0.20893	0.04365	1

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

ANALYSIS OF VARIANCE TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER												
SOURCE			DEG/FREEDOM		SUM/SQUARES		MEAN SQUARE		F			
BETWEEN			119		0.1698		0.0		0.0			
WITHIN			0		0.0		0.0					
TOTAL			119		0.1698							

SOURCE								SUM X1		CRUDE	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H	SUM/80						
1	0	0	0	0	0	0	0	3.9997			3.9997	30	0.1333	-0.0000
2	0	0	0	0	0	0	0	4.3529			4.3529	30	0.1451	0.0038
3	0	0	0	0	0	0	0	4.3414			4.3414	30	0.1447	0.0034
4	0	0	0	0	0	0	0	4.2653			4.2653	30	0.1422	0.0008
3								0.0027						
0	1	0	0	0	0	0	0	3.9095			3.9095	40	0.0977	-0.0436
0	2	0	0	0	0	0	0	5.6343			5.6343	40	0.1409	-0.0005
0	3	0	0	0	0	0	0	7.4154			7.4154	40	0.1854	0.0441
2								0.1537						
0	0	1	0	0	0	0	0	3.3604			3.3604	24	0.1400	-0.0013
0	0	2	0	0	0	0	0	3.3630			3.3630	24	0.1401	-0.0012
0	0	3	0	0	0	0	0	3.3312			3.3312	24	0.1388	-0.0025
0	0	4	0	0	0	0	0	3.3850			3.3850	24	0.1410	-0.0003
0	0	5	0	0	0	0	0	3.5196			3.5196	24	0.1467	0.0053
4								0.0009						
0	0	0	1	0	0	0	0	8.4565			8.4565	60	0.1409	-0.0004
0	0	0	2	0	0	0	0	8.5028			8.5028	60	0.1417	0.0004
1								0.0000						
1	1	0	0	0	0	0	0	0.9402			0.9402	10	0.0940	-0.0473
1	2	0	0	0	0	0	0	1.3535			1.3535	10	0.1354	-0.0060
1	3	0	0	0	0	0	0	1.7059			1.7059	10	0.1706	0.0293
2	1	0	0	0	0	0	0	1.0110			1.0110	10	0.1011	-0.0402
2	2	0	0	0	0	0	0	1.4082			1.4082	10	0.1408	0.0075
2	3	0	0	0	0	0	0	1.8537			1.8537	10	0.1854	0.0440
3	1	0	0	0	0	0	0	0.9803			0.9803	10	0.0980	-0.0433
3	2	0	0	0	0	0	0	1.4533			1.4533	10	0.1453	0.0040
3	3	0	0	0	0	0	0	1.9078			1.9078	10	0.1908	0.0495
4	1	0	0	0	0	0	0	0.9780			0.9780	10	0.0978	-0.0435
4	2	0	0	0	0	0	0	1.3394			1.3394	10	0.1339	-0.0074
4	3	0	0	0	0	0	0	1.9480			1.9480	10	0.1948	0.0535
6								0.1589						
1	0	1	0	0	0	0	0	0.8398			0.8398	6	0.1400	-0.0014
1	0	2	0	0	0	0	0	0.7949			0.7949	6	0.1325	-0.0088
1	0	3	0	0	0	0	0	0.7912			0.7912	6	0.1319	-0.0095
1	0	4	0	0	0	0	0	0.7884			0.7884	6	0.1314	-0.0099
1	0	5	0	0	0	0	0	0.7853			0.7853	6	0.1309	-0.0104
2	0	1	0	0	0	0	0	0.8794			0.8794	6	0.1466	0.0052
2	0	2	0	0	0	0	0	0.8266			0.8266	6	0.1378	-0.0036
2	0	3	0	0	0	0	0	0.8762			0.8762	6	0.1460	0.0047

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/NO	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
2	0	4	0	0	0	0	0	0.8744		0.8744	6	0.1457	0.0044
2	0	5	0	0	0	0	0	0.8963		0.8963	6	0.1494	0.0081
3	0	1	0	0	0	0	0	0.8220		0.8220	6	0.1370	-0.0043
3	0	2	0	0	0	0	0	0.8759		0.8759	6	0.1460	0.0067
3	0	3	0	0	0	0	0	0.8563		0.8563	6	0.1427	0.0014
3	0	4	0	0	0	0	0	0.8734		0.8734	6	0.1456	0.0042
3	0	5	0	0	0	0	0	0.9138		0.9138	6	0.1523	0.0110
4	0	1	0	0	0	0	0	0.8192		0.8192	6	0.1365	-0.0048
4	0	2	0	0	0	0	0	0.8655		0.8655	6	0.1442	0.0029
4	0	3	0	0	0	0	0	0.8075		0.8075	6	0.1346	-0.0067
4	0	4	0	0	0	0	0	0.8489		0.8489	6	0.1415	0.0001
4	0	5	0	0	0	0	0	0.9243		0.9243	6	0.1540	0.0127
12									0.0057				
1	0	0	1	0	0	0	0	2.0221		2.0221	15	0.1348	-0.0065
1	0	0	2	0	0	0	0	1.9775		1.9775	15	0.1318	-0.0095
2	0	0	1	0	0	0	0	2.2221		2.2221	15	0.1481	0.0068
2	0	0	2	0	0	0	0	2.1308		2.1308	15	0.1421	0.0007
3	0	0	1	0	0	0	0	2.1289		2.1289	15	0.1419	0.0006
3	0	0	2	0	0	0	0	2.2126		2.2126	15	0.1475	0.0062
4	0	0	1	0	0	0	0	2.0834		2.0834	15	0.1389	-0.0024
4	0	0	2	0	0	0	0	2.1818		2.1818	15	0.1455	0.0041
3									0.0036				
0	1	1	0	0	0	0	0	0.7850		0.7850	8	0.0981	-0.0432
0	1	2	0	0	0	0	0	0.7719		0.7719	8	0.0985	-0.0448
0	1	3	0	0	0	0	0	0.7891		0.7891	8	0.0986	-0.0427
0	1	4	0	0	0	0	0	0.7578		0.7578	8	0.0947	-0.0466
0	1	5	0	0	0	0	0	0.8057		0.8057	8	0.1007	-0.0406
0	2	1	0	0	0	0	0	1.1148		1.1148	8	0.1394	-0.0020
0	2	2	0	0	0	0	0	1.1287		1.1287	8	0.1411	-0.0002
0	2	3	0	0	0	0	0	1.0862		1.0862	8	0.1359	-0.0056
0	2	4	0	0	0	0	0	1.1420		1.1420	8	0.1428	0.0014
0	2	5	0	0	0	0	0	1.1624		1.1624	8	0.1493	0.0040
0	3	1	0	0	0	0	0	1.4606		1.4606	8	0.1826	0.0412
0	3	2	0	0	0	0	0	1.4624		1.4624	8	0.1828	0.0415
0	3	3	0	0	0	0	0	1.4559		1.4559	8	0.1820	0.0407
0	3	4	0	0	0	0	0	1.4852		1.4852	8	0.1896	0.0443
0	3	5	0	0	0	0	0	1.5513		1.5513	8	0.1939	0.0526
8									0.1550				
0	1	0	1	0	0	0	0	1.9419		1.9419	20	0.0971	-0.0442
0	1	0	2	0	0	0	0	1.9676		1.9676	20	0.0995	-0.0429
0	2	0	1	0	0	0	0	2.8345		2.8345	20	0.1417	0.0004
0	2	0	2	0	0	0	0	2.7999		2.7999	20	0.1406	-0.0013
0	3	0	1	0	0	0	0	3.6801		3.6801	20	0.1840	0.0427
0	3	0	2	0	0	0	0	3.7353		3.7353	20	0.1868	0.0454
2									0.1538				
0	0	1	1	0	0	0	0	1.6013		1.6013	12	0.1401	-0.0062
0	0	1	2	0	0	0	0	1.6791		1.6791	12	0.1399	-0.0014
0	0	2	1	0	0	0	0	1.6608		1.6608	12	0.1364	-0.0029
0	0	2	2	0	0	0	0	1.7021		1.7021	12	0.1418	0.0005
0	0	3	1	0	0	0	0	1.6429		1.6429	12	0.1353	-0.0041
0	0	3	2	0	0	0	0	1.7043		1.7043	12	0.1429	0.0001
0	0	4	1	0	0	0	0	1.6860		1.6860	12	0.1406	-0.0020
0	0	4	2	0	0	0	0	1.6985		1.6985	12	0.1415	-0.0002
0	0	5	1	0	0	0	0	1.8049		1.8049	12	0.1504	0.0091
0	0	5	2	0	0	0	0	1.7148		1.7148	12	0.1429	0.0016

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	1	1	0	0	0	0	0	0.1916		0.1916	2	0.0958	-0.0455
1	1	2	0	0	0	0	0	0.1955		0.1955	2	0.0977	-0.0436
1	1	3	0	0	0	0	0	0.1826		0.1826	2	0.0913	-0.0500
1	1	4	0	0	0	0	0	0.1852		0.1852	2	0.0926	-0.0487
1	1	5	0	0	0	0	0	0.1853		0.1853	2	0.0926	-0.0487
1	2	1	0	0	0	0	0	0.2946		0.2946	2	0.1473	0.0060
1	2	2	0	0	0	0	0	0.2621		0.2621	2	0.1310	-0.0103
1	2	3	0	0	0	0	0	0.2682		0.2682	2	0.1341	-0.0072
1	2	4	0	0	0	0	0	0.2666		0.2666	2	0.1333	-0.0080
1	2	5	0	0	0	0	0	0.2621		0.2621	2	0.1310	-0.0103
1	3	1	0	0	0	0	0	0.3536		0.3536	2	0.1768	0.0355
1	3	2	0	0	0	0	0	0.3374		0.3374	2	0.1687	0.0274
1	3	3	0	0	0	0	0	0.3404		0.3404	2	0.1702	0.0289
1	3	4	0	0	0	0	0	0.3365		0.3365	2	0.1683	0.0269
1	3	5	0	0	0	0	0	0.3380		0.3380	2	0.1690	0.0277
2	1	1	0	0	0	0	0	0.2131		0.2131	2	0.1065	-0.0348
2	1	2	0	0	0	0	0	0.1903		0.1903	2	0.0951	-0.0462
2	1	3	0	0	0	0	0	0.2018		0.2018	2	0.1009	-0.0404
2	1	4	0	0	0	0	0	0.1952		0.1952	2	0.0976	-0.0437
2	1	5	0	0	0	0	0	0.2106		0.2106	2	0.1053	-0.0360
2	2	1	0	0	0	0	0	0.2929		0.2929	2	0.1465	0.0051
2	2	2	0	0	0	0	0	0.2852		0.2852	2	0.1426	0.0013
2	2	3	0	0	0	0	0	0.2838		0.2838	2	0.1419	0.0006
2	2	4	0	0	0	0	0	0.3175		0.3175	2	0.1587	0.0174
2	2	5	0	0	0	0	0	0.3087		0.3087	2	0.1544	0.0130
2	3	1	0	0	0	0	0	0.3734		0.3734	2	0.1867	0.0454
2	3	2	0	0	0	0	0	0.3511		0.3511	2	0.1756	0.0342
2	3	3	0	0	0	0	0	0.3905		0.3905	2	0.1953	0.0539
2	3	4	0	0	0	0	0	0.3617		0.3617	2	0.1808	0.0395
2	3	5	0	0	0	0	0	0.3770		0.3770	2	0.1885	0.0472
3	1	1	0	0	0	0	0	0.1873		0.1873	2	0.0937	-0.0477
3	1	2	0	0	0	0	0	0.1958		0.1958	2	0.0979	-0.0434
3	1	3	0	0	0	0	0	0.2053		0.2053	2	0.1026	-0.0387
3	1	4	0	0	0	0	0	0.1931		0.1931	2	0.0966	-0.0448
3	1	5	0	0	0	0	0	0.1988		0.1988	2	0.0994	-0.0419
3	2	1	0	0	0	0	0	0.2798		0.2798	2	0.1399	-0.0014
3	2	2	0	0	0	0	0	0.2979		0.2979	2	0.1489	0.0076
3	2	3	0	0	0	0	0	0.2821		0.2821	2	0.1411	-0.0003
3	2	4	0	0	0	0	0	0.2856		0.2856	2	0.1428	0.0015
3	2	5	0	0	0	0	0	0.3078		0.3078	2	0.1539	0.0126
3	3	1	0	0	0	0	0	0.3548		0.3548	2	0.1774	0.0361
3	3	2	0	0	0	0	0	0.3822		0.3822	2	0.1911	0.0498
3	3	3	0	0	0	0	0	0.3689		0.3689	2	0.1844	0.0431
3	3	4	0	0	0	0	0	0.3947		0.3947	2	0.1974	0.0560
3	3	5	0	0	0	0	0	0.4071		0.4071	2	0.2036	0.0622
4	1	1	0	0	0	0	0	0.1929		0.1929	2	0.0965	-0.0449
4	1	2	0	0	0	0	0	0.1903		0.1903	2	0.0952	-0.0462
4	1	3	0	0	0	0	0	0.1993		0.1993	2	0.0997	-0.0417
4	1	4	0	0	0	0	0	0.1843		0.1843	2	0.0921	-0.0492
4	1	5	0	0	0	0	0	0.2111		0.2111	2	0.1055	-0.0358
4	2	1	0	0	0	0	0	0.2475		0.2475	2	0.1237	-0.0176
4	2	2	0	0	0	0	0	0.2835		0.2835	2	0.1418	0.0004
4	2	3	0	0	0	0	0	0.2521		0.2521	2	0.1260	-0.0153
4	2	4	0	0	0	0	0	0.2723		0.2723	2	0.1362	-0.0052
4	2	5	0	0	0	0	0	0.2840		0.2840	2	0.1420	0.0007
4	3	1	0	0	0	0	0	0.3787		0.3787	2	0.1894	0.0480
4	3	2	0	0	0	0	0	0.3916		0.3916	2	0.1958	0.0545
4	3	3	0	0	0	0	0	0.3561		0.3561	2	0.1780	0.0387
4	3	4	0	0	0	0	0	0.3922		0.3922	2	0.1961	0.0548
4	3	5	0	0	0	0	0	0.4292		0.4292	2	0.2146	0.0733
24									0.1639				
1	1	0	1	0	0	0	0	0.4678		0.4678	5	0.0935	-0.0478
1	1	0	2	0	0	0	0	0.4726		0.4726	5	0.0945	-0.0468
1	2	0	1	0	0	0	0	0.6969		0.6969	5	0.1394	-0.0019

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
1	2	0	2	0	0	0	0	0.6566		0.6566	5	0.1313	-0.0100
1	3	0	1	0	0	0	0	0.8576		0.8576	5	0.1715	0.0302
1	3	0	2	0	0	0	0	0.8483		0.8483	5	0.1697	0.0283
2	1	0	1	0	0	0	0	0.5081		0.5081	5	0.1016	-0.0397
2	1	0	2	0	0	0	0	0.5029		0.5029	5	0.1006	-0.0408
2	2	0	1	0	0	0	0	0.7651		0.7651	5	0.1530	0.0117
2	2	0	2	0	0	0	0	0.7231		0.7231	5	0.1446	0.0033
2	3	0	1	0	0	0	0	0.9489		0.9489	5	0.1898	0.0484
2	3	0	2	0	0	0	0	0.9048		0.9048	5	0.1810	0.0396
3	1	0	1	0	0	0	0	0.4882		0.4882	5	0.0976	-0.0437
3	1	0	2	0	0	0	0	0.4921		0.4921	5	0.0984	-0.0429
3	2	0	1	0	0	0	0	0.7239		0.7239	5	0.1448	0.0035
3	2	0	2	0	0	0	0	0.7294		0.7294	5	0.1459	0.0045
3	3	0	1	0	0	0	0	0.9167		0.9167	5	0.1833	0.0420
3	3	0	2	0	0	0	0	0.9911		0.9911	5	0.1982	0.0569
4	1	0	1	0	0	0	0	0.4779		0.4779	5	0.0956	-0.0457
4	1	0	2	0	0	0	0	0.5000		0.5000	5	0.1000	-0.0413
4	2	0	1	0	0	0	0	0.6486		0.6486	5	0.1297	-0.0116
4	2	0	2	0	0	0	0	0.6908		0.6908	5	0.1382	-0.0037
4	3	0	1	0	0	0	0	0.9569		0.9569	5	0.1914	0.0501
4	3	0	2	0	0	0	0	0.9910		0.9910	5	0.1982	0.0569
								6	0.1603				
1	0	1	1	0	0	0	0	0.4336		0.4336	3	0.1445	-0.0032
1	0	1	2	0	0	0	0	0.4062		0.4062	3	0.1354	-0.0059
1	0	2	1	0	0	0	0	0.3881		0.3881	3	0.1294	-0.0120
1	0	2	2	0	0	0	0	0.4068		0.4068	3	0.1356	-0.0057
1	0	3	1	0	0	0	0	0.3982		0.3982	3	0.1327	-0.0086
1	0	3	2	0	0	0	0	0.3931		0.3931	3	0.1310	-0.0103
1	0	4	1	0	0	0	0	0.4007		0.4007	3	0.1336	-0.0078
1	0	4	2	0	0	0	0	0.3877		0.3877	3	0.1297	-0.0121
1	0	5	1	0	0	0	0	0.4016		0.4016	3	0.1339	-0.0075
1	0	5	2	0	0	0	0	0.3837		0.3837	3	0.1279	-0.0134
2	0	1	1	0	0	0	0	0.4565		0.4565	3	0.1522	0.0108
2	0	1	2	0	0	0	0	0.4229		0.4229	3	0.1410	-0.0003
2	0	2	1	0	0	0	0	0.4136		0.4136	3	0.1379	-0.0034
2	0	2	2	0	0	0	0	0.4130		0.4130	3	0.1377	-0.0037
2	0	3	1	0	0	0	0	0.4483		0.4483	3	0.1494	0.0081
2	0	3	2	0	0	0	0	0.4278		0.4278	3	0.1426	0.0013
2	0	4	1	0	0	0	0	0.4499		0.4499	3	0.1500	0.0086
2	0	4	2	0	0	0	0	0.4245		0.4245	3	0.1415	0.0002
2	0	5	1	0	0	0	0	0.4537		0.4537	3	0.1512	0.0099
2	0	5	2	0	0	0	0	0.4426		0.4426	3	0.1475	0.0062
3	0	1	1	0	0	0	0	0.3903		0.3903	3	0.1301	-0.0112
3	0	1	2	0	0	0	0	0.4317		0.4317	3	0.1439	0.0026
3	0	2	1	0	0	0	0	0.4321		0.4321	3	0.1440	0.0027
3	0	2	2	0	0	0	0	0.4438		0.4438	3	0.1479	0.0066
3	0	3	1	0	0	0	0	0.4122		0.4122	3	0.1374	-0.0039
3	0	3	2	0	0	0	0	0.4440		0.4440	3	0.1480	0.0067
3	0	4	1	0	0	0	0	0.4260		0.4260	3	0.1420	0.0007
3	0	4	2	0	0	0	0	0.4474		0.4474	3	0.1491	0.0078
3	0	5	1	0	0	0	0	0.4682		0.4682	3	0.1561	0.0147
3	0	5	2	0	0	0	0	0.4456		0.4456	3	0.1485	0.0072
4	0	1	1	0	0	0	0	0.4009		0.4009	3	0.1336	-0.0077
4	0	1	2	0	0	0	0	0.4183		0.4183	3	0.1394	-0.0019
4	0	2	1	0	0	0	0	0.4270		0.4270	3	0.1423	0.0010
4	0	2	2	0	0	0	0	0.4385		0.4385	3	0.1462	0.0048
4	0	3	1	0	0	0	0	0.3641		0.3641	3	0.1214	-0.0199
4	0	3	2	0	0	0	0	0.4433		0.4433	3	0.1478	0.0065
4	0	4	1	0	0	0	0	0.4100		0.4100	3	0.1367	-0.0047
4	0	4	2	0	0	0	0	0.4389		0.4389	3	0.1463	0.0050
4	0	5	1	0	0	0	0	0.4814		0.4814	3	0.1605	0.0191
4	0	5	2	0	0	0	0	0.4428		0.4428	3	0.1476	0.0063
								12	0.0085				

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE TUM/NO	SUM X2	FREQUENCY	MFAN X1	EFFECT X1
A	B	C	D	E	F	G	H						
0	1	1	1	0	0	0	0	0.4017		0.4017	4	0.1004	-0.0409
0	1	1	2	0	0	0	0	0.3833		0.3833	4	0.0958	-0.0455
0	1	2	1	0	0	0	0	0.3670		0.3670	4	0.0918	-0.0496
0	1	2	2	0	0	0	0	0.4049		0.4049	4	0.1012	-0.0401
0	1	3	1	0	0	0	0	0.4001		0.4001	4	0.1000	-0.0413
0	1	3	2	0	0	0	0	0.3890		0.3890	4	0.0972	-0.0441
0	1	4	1	0	0	0	0	0.3684		0.3684	4	0.0921	-0.0492
0	1	4	2	0	0	0	0	0.3894		0.3894	4	0.0974	-0.0440
0	1	5	1	0	0	0	0	0.4047		0.4047	4	0.1012	-0.0402
0	1	5	2	0	0	0	0	0.4010		0.4010	4	0.1003	-0.0411
0	2	1	1	0	0	0	0	0.5537		0.5537	4	0.1384	-0.0029
0	2	1	2	0	0	0	0	0.5611		0.5611	4	0.1403	-0.0011
0	2	2	1	0	0	0	0	0.5640		0.5640	4	0.1410	-0.0003
0	2	2	2	0	0	0	0	0.5647		0.5647	4	0.1412	-0.0001
0	2	3	1	0	0	0	0	0.5280		0.5280	4	0.1320	-0.0093
0	2	3	2	0	0	0	0	0.5582		0.5582	4	0.1396	-0.0018
0	2	4	1	0	0	0	0	0.5685		0.5685	4	0.1421	0.0008
0	2	4	2	0	0	0	0	0.5735		0.5735	4	0.1434	0.0020
0	2	5	1	0	0	0	0	0.6203		0.6203	4	0.1551	0.0137
0	2	5	2	0	0	0	0	0.5423		0.5423	4	0.1356	-0.0057
0	3	1	1	0	0	0	0	0.7258		0.7258	4	0.1815	0.0401
0	3	1	2	0	0	0	0	0.7348		0.7348	4	0.1837	0.0424
0	3	2	1	0	0	0	0	0.7299		0.7299	4	0.1825	0.0411
0	3	2	2	0	0	0	0	0.7325		0.7325	4	0.1831	0.0418
0	3	3	1	0	0	0	0	0.6949		0.6949	4	0.1737	0.0324
0	3	3	2	0	0	0	0	0.7610		0.7610	4	0.1903	0.0489
0	3	4	1	0	0	0	0	0.7496		0.7496	4	0.1814	0.0461
0	3	4	2	0	0	0	0	0.7356		0.7356	4	0.1839	0.0426
0	3	5	1	0	0	0	0	0.7799		0.7799	4	0.1928	0.0537
0	3	5	2	0	0	0	0	0.7714		0.7714	4	0.1928	0.0515
8									0.1568				
1	1	1	1	0	0	0	0	0.0935		0.0935	1	0.0935	-0.0478
1	1	1	2	0	0	0	0	0.0981		0.0981	1	0.0981	-0.0432
1	1	2	1	0	0	0	0	0.0918		0.0918	1	0.0918	-0.0495
1	1	2	2	0	0	0	0	0.1036		0.1036	1	0.1036	0.0377
1	1	3	1	0	0	0	0	0.0947		0.0947	1	0.0947	-0.0466
1	1	3	2	0	0	0	0	0.0879		0.0879	1	0.0879	-0.0534
1	1	4	1	0	0	0	0	0.0935		0.0935	1	0.0935	-0.0478
1	1	4	2	0	0	0	0	0.0917		0.0917	1	0.0917	-0.0496
1	1	5	1	0	0	0	0	0.0941		0.0941	1	0.0941	-0.0473
1	1	5	2	0	0	0	0	0.0912		0.0912	1	0.0912	-0.0501
1	2	1	1	0	0	0	0	0.1600		0.1600	1	0.1600	0.0187
1	2	1	2	0	0	0	0	0.1346		0.1346	1	0.1346	-0.0067
1	2	2	1	0	0	0	0	0.1306		0.1306	1	0.1306	-0.0107
1	2	2	2	0	0	0	0	0.1314		0.1314	1	0.1314	-0.0099
1	2	3	1	0	0	0	0	0.1335		0.1335	1	0.1335	-0.0079
1	2	3	2	0	0	0	0	0.1347		0.1347	1	0.1347	-0.0066
1	2	4	1	0	0	0	0	0.1344		0.1344	1	0.1344	-0.0069
1	2	4	2	0	0	0	0	0.1322		0.1322	1	0.1322	-0.0091
1	2	5	1	0	0	0	0	0.1384		0.1384	1	0.1384	-0.0029
1	2	5	2	0	0	0	0	0.1236		0.1236	1	0.1236	-0.0177
1	3	1	1	0	0	0	0	0.1801		0.1801	1	0.1801	0.0388
1	3	1	2	0	0	0	0	0.1735		0.1735	1	0.1735	0.0322
1	3	2	1	0	0	0	0	0.1656		0.1656	1	0.1656	0.0243
1	3	2	2	0	0	0	0	0.1718		0.1718	1	0.1718	0.0304
1	3	3	1	0	0	0	0	0.1700		0.1700	1	0.1700	0.0286
1	3	3	2	0	0	0	0	0.1704		0.1704	1	0.1704	0.0291
1	3	4	1	0	0	0	0	0.1727		0.1727	1	0.1727	0.0314
1	3	4	2	0	0	0	0	0.1638		0.1638	1	0.1638	0.0224
1	3	5	1	0	0	0	0	0.1691		0.1691	1	0.1691	0.0278
1	3	5	2	0	0	0	0	0.1689		0.1689	1	0.1689	0.0275
2	1	1	1	0	0	0	0	0.1098		0.1098	1	0.1098	-0.0315
2	1	1	2	0	0	0	0	0.1039		0.1039	1	0.1039	-0.0381

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM X1	CRUDE SUM/SQ	SUM X2	FREQUENCY	MEAN X1	EFFECT X1
2	1	2	1	0	0	0	0	0.0950		0.0950	1	0.0950	-0.0463
2	1	2	2	0	0	0	0	0.0953		0.0953	1	0.0953	-0.0460
2	1	3	1	0	0	0	0	0.1053		0.1053	1	0.1053	-0.0360
2	1	3	2	0	0	0	0	0.0965		0.0965	1	0.0965	-0.0448
2	1	4	1	0	0	0	0	0.0969		0.0969	1	0.0969	-0.0444
2	1	4	2	0	0	0	0	0.0984		0.0984	1	0.0984	-0.0430
2	1	5	1	0	0	0	0	0.1011		0.1011	1	0.1011	-0.0402
2	1	5	2	0	0	0	0	0.1094		0.1094	1	0.1094	-0.0319
2	2	1	1	0	0	0	0	0.1514		0.1514	1	0.1514	0.0101
2	2	1	2	0	0	0	0	0.1415		0.1415	1	0.1415	0.0002
2	2	2	1	0	0	0	0	0.1398		0.1398	1	0.1398	-0.0015
2	2	2	2	0	0	0	0	0.1454		0.1454	1	0.1454	0.0041
2	2	3	1	0	0	0	0	0.1405		0.1405	1	0.1405	-0.0008
2	2	3	2	0	0	0	0	0.1433		0.1433	1	0.1433	0.0020
2	2	4	1	0	0	0	0	0.1664		0.1664	1	0.1664	0.0250
2	2	4	2	0	0	0	0	0.1511		0.1511	1	0.1511	0.0098
2	2	5	1	0	0	0	0	0.1669		0.1669	1	0.1669	0.0256
2	2	5	2	0	0	0	0	0.1418		0.1418	1	0.1418	0.0005
2	3	1	1	0	0	0	0	0.1952		0.1952	1	0.1952	0.0539
2	3	1	2	0	0	0	0	0.1782		0.1782	1	0.1782	0.0368
2	3	2	1	0	0	0	0	0.1788		0.1788	1	0.1788	0.0375
2	3	2	2	0	0	0	0	0.1723		0.1723	1	0.1723	0.0310
2	3	3	1	0	0	0	0	0.2025		0.2025	1	0.2025	0.0612
2	3	3	2	0	0	0	0	0.1880		0.1880	1	0.1880	0.0467
2	3	4	1	0	0	0	0	0.1867		0.1867	1	0.1867	0.0453
2	3	4	2	0	0	0	0	0.1750		0.1750	1	0.1750	0.0337
2	3	5	1	0	0	0	0	0.1856		0.1856	1	0.1856	0.0443
2	3	5	2	0	0	0	0	0.1914		0.1914	1	0.1914	0.0500
3	1	1	1	0	0	0	0	0.0979		0.0979	1	0.0979	-0.0434
3	1	1	2	0	0	0	0	0.0894		0.0894	1	0.0894	-0.0519
3	1	2	1	0	0	0	0	0.0952		0.0952	1	0.0952	-0.0461
3	1	2	2	0	0	0	0	0.1006		0.1006	1	0.1006	-0.0407
3	1	3	1	0	0	0	0	0.1027		0.1027	1	0.1027	-0.0387
3	1	3	2	0	0	0	0	0.1026		0.1026	1	0.1026	-0.0387
3	1	4	1	0	0	0	0	0.0942		0.0942	1	0.0942	-0.0471
3	1	4	2	0	0	0	0	0.0989		0.0989	1	0.0989	-0.0424
3	1	5	1	0	0	0	0	0.0983		0.0983	1	0.0983	-0.0430
3	1	5	2	0	0	0	0	0.1005		0.1005	1	0.1005	-0.0408
3	2	1	1	0	0	0	0	0.1320		0.1320	1	0.1320	-0.0093
3	2	1	2	0	0	0	0	0.1478		0.1478	1	0.1478	0.0065
3	2	2	1	0	0	0	0	0.1492		0.1492	1	0.1492	0.0079
3	2	2	2	0	0	0	0	0.1487		0.1487	1	0.1487	0.0074
3	2	3	1	0	0	0	0	0.1416		0.1416	1	0.1416	0.0003
3	2	3	2	0	0	0	0	0.1405		0.1405	1	0.1405	-0.0008
3	2	4	1	0	0	0	0	0.1361		0.1361	1	0.1361	-0.0052
3	2	4	2	0	0	0	0	0.1495		0.1495	1	0.1495	0.0081
3	2	5	1	0	0	0	0	0.1650		0.1650	1	0.1650	0.0237
3	2	5	2	0	0	0	0	0.1428		0.1428	1	0.1428	0.0015
3	3	1	1	0	0	0	0	0.1604		0.1604	1	0.1604	0.0191
3	3	1	2	0	0	0	0	0.1944		0.1944	1	0.1944	0.0531
3	3	2	1	0	0	0	0	0.1877		0.1877	1	0.1877	0.0464
3	3	2	2	0	0	0	0	0.1945		0.1945	1	0.1945	0.0532
3	3	3	1	0	0	0	0	0.1680		0.1680	1	0.1680	0.0267
3	3	3	2	0	0	0	0	0.2009		0.2009	1	0.2009	0.0595
3	3	4	1	0	0	0	0	0.1957		0.1957	1	0.1957	0.0544
3	3	4	2	0	0	0	0	0.1990		0.1990	1	0.1990	0.0577
3	3	5	1	0	0	0	0	0.2049		0.2049	1	0.2049	0.0636
3	3	5	2	0	0	0	0	0.2022		0.2022	1	0.2022	0.0609
4	1	1	1	0	0	0	0	0.1005		0.1005	1	0.1005	-0.0409
4	1	1	2	0	0	0	0	0.0925		0.0925	1	0.0925	-0.0489
4	1	2	1	0	0	0	0	0.0850		0.0850	1	0.0850	-0.0563
4	1	2	2	0	0	0	0	0.1053		0.1053	1	0.1053	-0.0360
4	1	3	1	0	0	0	0	0.0974		0.0974	1	0.0974	-0.0439
4	1	3	2	0	0	0	0	0.1019		0.1019	1	0.1019	-0.0394
4	1	4	1	0	0	0	0	0.0838		0.0838	1	0.0838	-0.0575
4	1	4	2	0	0	0	0	0.1004		0.1004	1	0.1004	-0.0409

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE								SUM Y ²	CRUDE STIM/SC	FREQUENCY	MEAN X ¹	EFFECT X ¹
A	B	C	D	E	F	G	H					
4	1	5	1	0	0	0	0	0.1112	0.1112	1	0.1112	-0.0301
4	1	5	2	0	0	0	0	0.0998	0.0998	1	0.0998	-0.0415
4	2	1	1	0	0	0	0	0.1103	0.1103	1	0.1103	-0.0310
4	2	1	2	0	0	0	0	0.1371	0.1371	1	0.1371	-0.0042
4	2	2	1	0	0	0	0	0.1443	0.1443	1	0.1443	0.0030
4	2	2	2	0	0	0	0	0.1392	0.1392	1	0.1392	-0.0021
4	2	3	1	0	0	0	0	0.1124	0.1124	1	0.1124	-0.0289
4	2	3	2	0	0	0	0	0.1397	0.1397	1	0.1397	-0.0017
4	2	4	1	0	0	0	0	0.1316	0.1316	1	0.1316	-0.0097
4	2	4	2	0	0	0	0	0.1407	0.1407	1	0.1407	-0.0006
4	2	5	1	0	0	0	0	0.1499	0.1499	1	0.1499	0.0086
4	2	5	2	0	0	0	0	0.1341	0.1341	1	0.1341	-0.0073
4	3	1	1	0	0	0	0	0.1901	0.1901	1	0.1901	0.0488
4	3	1	2	0	0	0	0	0.1887	0.1887	1	0.1887	0.0473
4	3	2	1	0	0	0	0	0.1977	0.1977	1	0.1977	0.0564
4	3	2	2	0	0	0	0	0.1939	0.1939	1	0.1939	0.0528
4	3	3	1	0	0	0	0	0.1544	0.1544	1	0.1544	0.0130
4	3	3	2	0	0	0	0	0.2017	0.2017	1	0.2017	0.0604
4	3	4	1	0	0	0	0	0.1945	0.1945	1	0.1945	0.0532
4	3	4	2	0	0	0	0	0.1977	0.1977	1	0.1977	0.0564
4	3	5	1	0	0	0	0	0.2203	0.2203	1	0.2203	0.0790
4	3	5	2	0	0	0	0	0.2089	0.2089	1	0.2089	0.0676
24									0.1698			

TABLE 8.2-13. TELPS P-LEG PERFORMANCE ANALYSIS FOR POWER (Cont)

SOURCE									DEG/FREEDOM	SUM/SQUARES	MEAN SQUARE
A	B	C	D	E	F	G	H				
1	0	0	0	0	0	0	0	A	3	0.0027	0.000900 *
0	1	0	0	0	0	0	0	B	2	0.1537	0.076850 *
0	0	1	0	0	0	0	0	C	4	0.0009	0.000225
0	0	0	1	0	0	0	0	D	1	0.0000	0.000000
1	1	0	0	0	0	0	0	AB	6	0.0025	0.000417 *
1	0	1	0	0	0	0	0	AC	12	0.0020	0.000167
1	0	0	1	0	0	0	0	AD	3	0.0009	0.000300
0	1	1	0	0	0	0	0	BC	8	0.0005	0.000162
0	1	0	1	0	0	0	0	BD	2	0.0001	0.000150
0	0	1	1	0	0	0	0	CD	4	0.0007	0.000167
1	1	1	0	0	0	0	0	ABD	24	0.0016	0.000067
1	1	0	1	0	0	0	0	ABD	6	0.0004	0.000067
1	0	1	1	0	0	0	0	ACD	12	0.0012	0.000100
0	1	1	1	0	0	0	0	BCD	8	0.0009	0.000112
1	1	1	1	0	0	0	0	ABCD	24	0.0015	0.000062
RESIDUAL									0	0.0000	0.0

* 5% SIGNIFICANT BASED ON ERROR MS = 7.6367×10^{-5} W/60 df

8.3 DIMENSIONAL CHANGES WITH TIME AND TEMPERATURE

All test specimens supplied to the TELPS Program were accompanied by a 100 percent inspection record of physical dimensions, weight and calculated density. Additional measurements of hot-end diameter, cold-end diameter, overall length and weight were made at the termination of each soak period of the test matrix, Figure 7.7-1. Prior to each measurement, the whisker growth, shown in Figure 8.3-1(a) through (d), resulting from condensation of sublimed thermoelectric material from the hotter portions was carefully removed. Early measurements indicated that in addition to the expected decrease in length with time due to sublimation, the diameters of the hot end of both P-type and N-type PbTe increased. This was not surprising in the N-type since the composition contains a small quantity of lead-rich low melting point second phase constituent which imparts a plastic quality to the material at elevated temperature. This limited plasticity is beneficial in establishing intimate ohmic pressure contacts to the iron electrodes commonly used in generator construction. The observed growth of the P leg hot-end diameter was unexpected in view of the pronounced inability of PbSnMnTe to plastically deform at the operating hot junction temperature used. These changes are shown in Figure 8.3-2(a) and (b). It was further noted that the rate of change of each dimension or weight appeared to be greatest at beginning of life.

The changes in dimension of each of the 15 legs from five different batches of a given conductivity type, which were subjected to one of three hot junction temperatures, were pooled and submitted to a second order least squares fit to determine the average time rate of change of each parameter. Thus, for each conductivity type, and for each of three hot junction temperatures, some 60 dimension and weight measurements were made over as many as five different operating times. The choice of a second order fit was arbitrary. A first order fit could not adequately describe the early life behavior, and higher than second order, the fit could not be expected to give meaningful derivatives in view of the scatter of the data.

It was further noted that the increase in diameter was approximately constant along the length to the hot end, while the diameter of the cold end remained virtually unchanged. With these observations in mind, the rate of change of various physical parameters of interest with respect to time and length were calculated on the basis of an assumed truncated cone-shaped leg. No volume allowance was made for the loss of material from the corners at the hot junction. Thus, the calculated density, for example, is lower than the true density by an amount approximately equal to the ratio of the true volume to the calculated volume.

The volume of a truncated conical leg having a hot junction diameter D_1 , cold junction diameter D_2 and length W is given by

$$V = \frac{\pi L}{12} (D_1^2 + D_1 D_2 + D_2^2)$$

Where

$$\frac{\partial V}{\partial L} = \frac{\pi}{12} (D_1^2 + D_1 D_2 + D_2^2) \quad \frac{\partial V}{\partial D_1} = \frac{\pi L}{12} (2D_1 + D_2) \quad \frac{\partial V}{\partial D_2} = \frac{\pi L}{12} (D_1 + 2D_2)$$

so that

$$\frac{dV}{dt} = \frac{\partial V}{\partial L} \cdot \frac{dL}{dt} + \frac{\partial V}{\partial D_1} \cdot \frac{dD_1}{dt} + \frac{\partial V}{\partial D_2} \cdot \frac{dD_2}{dt}$$

The length and diameter as functions of time were described by the form

$$X = X_0 + X$$

where

$$X = X_0 + At + Bt^2 \quad \text{and} \quad \frac{dx}{dt} = A + 2Bt$$

where the constants A and B were determined by the second order least squares fit to the observed changes with time.

The rate of change of volume with respect to length is

$$\frac{dV}{dL} = \frac{\frac{dV}{dt}}{\frac{dL}{dt}}$$

The average area was calculated by $\bar{A} = \frac{V}{L}$ and the $\frac{L}{A}$ ratio $= \frac{L^2}{V}$.

(a) View of P-Type Leg After
48.2 Hr at 1350°F

(b) View of N-Type Leg After
48.2 Hr at 1350°F

(c) P-Type Leg After 1st Soak Seg.
at 1350°F

(d) N-Type Leg After 1st Soak Seg.
at 1350°F

Figure 8.3-1. Thermoelectric Legs in Test Fixtures After High Temperature Testing

(a)

(b) at 1090°F

Figure 8.3-2. Appearance of Thermoelectric Legs After Removal of Sublimate.

Paragraphs 8.3.1 and 8.3.2 cover the least squares dependence of diameter, length, L/A and dV/dL versus time and hot junction temperature.

8.3.1 LEAST SQUARES POLYNOMIAL CURVE FITS TO CHANGES IN HOT END DIAMETER, COLD END DIAMETER, LENGTH, AND WEIGHT VERSUS TIME.

8.3.1.1 N-Leg, TH=1090°F

CHANGE IN HOT END DIAMETER OF N-LEGS AT TH=1090 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1065.85
MEAN VALUE OF Y = 2.08333 E-3
STD ERROR OF Y = 1.56098 E-3

POLYFIT OF DEGREE 2 INDEX OF DETERMINATION = .735105

TERM	COEFFICIENT
0	2.70201 E-4
1	3.03973 E-6
2	-7.29713 E-10

STD ERROR OF ESTIMATE FOR Y = 8.03406 E-4

CHANGE IN COLD END DIAMETER OF N-LEGS AT TH=1090 DEGS F.

NUMBER OF POINTS = 61
MEAN VALUE OF X = 1054.2
MEAN VALUE OF Y = 1.06557 E-4
STD ERROR OF Y = 5.42485 E-4

POLYFIT OF DEGREE 2 INDEX OF DETERMINATION = -1.63837 E-2

TERM	COEFFICIENT
0	1.91693 E-6
1	2.38951 E-7
2	-7.64893 E-11

STD ERROR OF ESTIMATE FOR Y = 5.46911 E-4

CHANGE IN LENGTH OF N-LEGS AT TH=1090 DEGS F.

NUMBER OF POINTS = 61
MEAN VALUE OF X = 1054.2
MEAN VALUE OF Y = -4.13770 E-3
STD ERROR OF Y = 4.33975 E-3

POLYFIT OF DEGREE 2 INDEX OF DETERMINATION = .515755

TERM	COEFFICIENT
0	-3.21768 E-4
1	-4.32640 E-6
2	3.86931 E-10

STD ERROR OF ESTIMATE FOR Y = 3.01993 E-3

CHANGE IN WEIGHT OF N-LEGS AT TH=1090 DEGS F.

NUMBER OF POINTS = 53
MEAN VALUE OF X = 1150.56
MEAN VALUE OF Y = -1.65642 E-2
STD ERROR OF Y = 2.25667 E-2

POLYFIT OF DEGREE 2 INDEX OF DETERMINATION = .368284

TERM	COEFFICIENT
0	3.07675 E-4
1	-1.18702 E-5
2	-1.46794 E-9

STD ERROR OF ESTIMATE FOR Y = 1.79361 E-2

8.3.1.2 N-Leg, TH=1220°F

CHANGE IN HOT END DIAMETER OF N-LEGS AT TH=1220 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1040.89
MEAN VALUE OF Y = .00251
STD ERROR OF Y = 2.50489 E-3

POLYFIT OF DEGREE 2 INDEX OF DETERMINATION = .46158

TERM	COEFFICIENT
0	2.55092 E-4
1	2.88501 E-6
2	-4.14526 E-10

STD ERROR OF ESTIMATE FOR Y = 1.83802 E-3

CHANGE IN COLD END DIAMETER OF N-LEGS AT TH=1220 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1040.89
MEAN VALUE OF Y = 5.33333 E-5
STD ERROR OF Y = 4.80983 E-4

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = -3.18194 E-2

TERM	COEFFICIENT
0	2.83336 E-5
1	1.47437 E-7
2	-7.11872 E-11

STD ERROR OF ESTIMATE FOR Y = 4.88575 E-4

CHANGE IN LENGTH OF N-LEGS AT TH=1220 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1040.89
MEAN VALUE OF Y = -9.07833 E-3
STD ERROR OF Y = 7.65086 E-3

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .615091

TERM	COEFFICIENT
0	-8.72153 E-4
1	-1.21847 E-5
2	2.48067 E-9

STD ERROR OF ESTIMATE FOR Y = 4.74667 E-3

CHANGE IN WEIGHT OF N-LEGS AT TH=1220 DEGS F.

NUMBER OF POINTS = 53
MEAN VALUE OF X = 905.098
MEAN VALUE OF Y = -3.70321 E-2
STD ERROR OF Y = 2.73689 E-2

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .789432

TERM	COEFFICIENT
0	-2.56712 E-3
1	-8.88048 E-5
2	3.10725 E-8

STD ERROR OF ESTIMATE FOR Y = 1.25589 E-2

8.3.1.3 N-Leg, TH=1350°F

CHANGE IN HOT END DIAMETER OF N-LEGS AT TH=1350 DEGS. F.

NUMBER OF POINTS = 67
MEAN VALUE OF X = 721.849
MEAN VALUE OF Y = 4.98955 E-3
STD ERROR OF Y = 6.07097 E-3

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .576171

TERM	COEFFICIENT
0	6.19344 E-4
1	8.34300 E-6
2	-1.37187 E-9

STD ERROR OF ESTIMATE FOR Y = 3.95233 E-3

CHANGE IN COLD END DIAMETER OF N-LEGS AT TH=1350 DEGS F.

NUMBER OF POINTS = 67
MEAN VALUE OF X = 721.849
MEAN VALUE OF Y = 2.71642 E-4
STD ERROR OF Y = 3.95737 E-4

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = 5.86735 E-2

TERM	COEFFICIENT
0	1.43438 E-4
1	4.00619 E-7
2	-1.33671 E-10

STD ERROR OF ESTIMATE FOR Y = 3.83952 E-4

CHANGE IN LENGTH OF N-LEGS AT TH=1350 DEGS F.

NUMBER OF POINTS = 67
MEAN VALUE OF X = 721.849
MEAN VALUE OF Y = .028806
STD ERROR OF Y = 2.72043 E-2

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .80334

TERM	COEFFICIENT
0	-7.36854 E-3
1	-3.11811 E-5
2	8.88967 E-10

STD ERROR OF ESTIMATE FOR Y = 1.20641 E-2

CHANGE IN WEIGHT OF N-LEGS AT TH=1350 DEGS F.

NUMBER OF POINTS = 59
MEAN VALUE OF X = 813.192
MEAN VALUE OF Y = -.151485
STD ERROR OF Y = .125276

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .798767

TERM	COEFFICIENT
0	-3.41275 E-2
1	-2.01205 E-4
2	3.38337 E-8

STD ERROR OF ESTIMATE FOR Y = 5.61976 E-2

8.3.1.4 P-Leg, TH=1090°F

CHANGE IN HOT END DIAMETER OF P-LEGS AT TH=1090 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1041.09
MEAN VALUE OF Y = 7.71667 E-4
STD ERROR OF Y = 6.59248 E-4

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .552741

TERM	COEFFICIENT
0	6.95362 E-5
1	2.01910 E-6
2	-7.23994 E-10

STD ERROR OF ESTIMATE FOR Y = 4.40888 E-4

CHANGE IN COLD END DIAMETER OF P-LEGS AT TH=1090 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1041.09
MEAN VALUE OF Y = .000155
STD ERROR OF Y = 4.03554 E-4

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = 4.89067 E-2

TERM	COEFFICIENT
0	3.99731 E-5
1	6.20791 E-7
2	-2.74755 E-10

STD ERROR OF ESTIMATE FOR Y = 3.93562 E-4

CHANGE IN LENGTH OF P-LEGS AT TH=1090 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1041.09
MEAN VALUE OF Y = -.000875
STD ERROR OF Y = 1.30054 E-3

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .277671

TERM	COEFFICIENT
0	-5.09885 E-5
1	-9.16075 E-7
2	6.70779 E-11

STD ERROR OF ESTIMATE FOR Y = 1.10533 E-3

CHANGE IN WEIGHT OF P-LEGS AT TH=1090 DEGS F.

NUMBER OF POINTS = 53
MEAN VALUE OF X = 1123.67
MEAN VALUE OF Y = 6.42453 E-3
STD ERROR OF Y = 1.03732 E-2

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .376866

TERM	COEFFICIENT
0	8.73197 E-4
1	-3.82497 E-6
2	-1.38480 E-9

STD ERROR OF ESTIMATE FOR Y = 8.18850 E-3

8.3.1.5 P-Leg, Th=1220°F

CHANGE IN HOT END DIAMETER OF P-LEGS AT TH=1220 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1042.36
MEAN VALUE OF Y = 2.84167 E-3
STD ERROR OF Y = 2.06219 E-3

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .550858

TERM	COEFFICIENT
0	4.60069 E-4
1	5.65171 E-6
2	-1.91296 E-9

STD ERROR OF ESTIMATE FOR Y = 1.38204 E-3

CHANGE IN COLD END DIAMETER OF P-LEGS AT TH=1220 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1042.36
MEAN VALUE OF Y = 3.26667 E-4
STD ERROR OF Y = 3.44382 E-4

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .220632

TERM	COEFFICIENT
0	5.82582 E-5
1	7.31491 E-7
2	-2.69306 E-10

STD ERROR OF ESTIMATE FOR Y = 3.04027 E-4

CHANGE IN LENGTH OF P-LEGS AT TH=1220 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 1042.36
MEAN VALUE OF Y = 4.73833 E-3
STD ERROR OF Y = 3.93589 E-3

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .74027

TERM	COEFFICIENT
0	-4.02790 E-4
1	-5.40961 E-6
2	7.10360 E-10

STD ERROR OF ESTIMATE FOR Y = 2.00588 E-3

CHANGE IN WEIGHT OF P-LEGS AT TH=1220 DEGS F.

NUMBER OF POINTS = 53
MEAN VALUE OF X = 893.966
MEAN VALUE OF Y = -2.30698 E-2
STD ERROR OF Y = 1.92068 E-2

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .880087

TERM	COEFFICIENT
0	-1.29966 E-3
1	-3.47205 E-5
2	6.36024 E-9

STD ERROR OF ESTIMATE FOR Y = 6.65101 E-3

8.3.1.6 P-Leg, TH=1350°F

CHANGE IN HOT END DIAMETER OF P-LEGS AT TH=1350 DEGS F.

NUMBER OF POINTS = 68
MEAN VALUE OF X = 699.678
MEAN VALUE OF Y = 2.64853 E-3
STD ERROR OF Y = 2.25372 E-3

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .848355

TERM	COEFFICIENT
0	4.58855 E-4
1	6.32483 E-6
2	-1.95445 E-9

STD ERROR OF ESTIMATE FOR Y = 8.77636 E-4

CHANGE IN COLD END DIAMETER OF P-LEGS AT TH=1350 DEGS F.

NUMBER OF POINTS = 68
MEAN VALUE OF X = 699.678
MEAN VALUE OF Y = 3.63235 E-4
STD ERROR OF Y = 3.56561 E-4

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .22585

TERM	COEFFICIENT
0	1.63294 E-4
1	7.39769 E-7
2	-2.77701 E-10

STD ERROR OF ESTIMATE FOR Y = 3.13723 E-4

CHANGE IN LENGTH OF P-LEGS AT TH=1350 DEGS F.

NUMBER OF POINTS = 68
MEAN VALUE OF X = 699.678
MEAN VALUE OF Y = -1.62294 E-2
STD ERROR OF Y = 1.75013 E-2

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .952166

TERM	COEFFICIENT
0	-1.42255 E-3
1	-2.20266 E-5
2	5.28602 E-10

STD ERROR OF ESTIMATE FOR Y = 3.82771 E-3

CHANGE IN WEIGHT OF P-LEGS AT TH=1350 DEGS F.

NUMBER OF POINTS = 60
MEAN VALUE OF X = 786.542
MEAN VALUE OF Y = -.127218
STD ERROR OF Y = .114388

POLYFIT OF DEGREE 2

INDEX OF DETERMINATION = .879192

TERM	COEFFICIENT.
0	-8.91125 E-3
1	-2.55611 E-4
2	6.38393 E-8

STD ERROR OF ESTIMATE FOR Y = 3.97585 E-2

8.3.2 THE FOLLOWING PREDICTED PHYSICAL DIMENSIONS, WEIGHTS, AND THEIR TIME AND LENGTH DERIVATIVES ARE BASED ON MEASUREMENTS MADE AT ROOM TEMPERATURE AFTER VARIOUS INGRADIENT TEST PERIODS TOTALING ABOUT 2200 HOURS AT THE INDICATED HOT JUNCTION TEMPERATURES. LINEAR AND CUBIC TEMPERATURE EXPANSION EFFECTS HAVE NOT BEEN INCLUDED.

8.3.2.1 TH=1090°F

N-TYPE PBTE AT TH=1090 DEGS F AFTER 0 HOURS.

HOT END DIAMETER	=	.206572	INCHES
LENGTH	=	.401174	INCHES
L/A	=	11.9857	INCHES/SQ INCH
WEIGHT	=	1.76021	GRAMS
VOLUME	=	1.34278 E-2	CU INCHES
DENSITY	=	131.087	GRAMS/CU IN
DL/DT	=	4.32640 E-6	INCHES/HOUR
D(D-HOT)/DT	=	3.03973 E-6	INCHES/HOUR
DV/DT	=	6.84916 E-8	CU IN/HR
DP/DT	=	-1.55265 E-3	GMS/CU IN HR
DV/DL	=	-1.58311 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-2.66694 E-5	
DP/DL	=	358.877	GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1090 DEGS F AFTER 500 HOURS.

HOT END DIAMETER	=	.20791	INCHES
LENGTH	=	.399108	INCHES
L/A	=	11.8413	INCHES/SQ INCH
WEIGHT	=	1.7539	GRAMS
VOLUME	=	1.34519 E-2	CU INCHES
DENSITY	=	130.384	GRAMS/CU IN
DL/DT	=	-3.93947 E-6	INCHES/HOUR
D(D-HOT)/DT	=	2.31002 E-6	INCHES/HOUR
DV/DT	=	2.79409 E-8	CU IN/HR
DP/DT	=	-1.26237 E-3	GMS/CU IN HR
DV/DL	=	-7.09256 E-3	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-2.18185 E-5	
DP/DL	=	320.441	GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1090 DEGS F AFTER 1000 HOURS.

HOT END DIAMETER	=	.208882	INCHES
LENGTH	=	.397235	INCHES
L/A	=	11.727	INCHES/SQ INCH
WEIGHT	=	1.74687	GRAMS
VOLUME	=	1.34558 E-2	CU INCHES
DENSITY	=	129.823	GRAMS/CU IN
DL/DT	=	-3.55254 E-6	INCHES/HOUR
D(D-HOT)/DT	=	1.58030 E-6	INCHES/HOUR
DV/DT	=	-1.21883 E-8	CU IN/HR
DP/DT	=	-9.82758 E-4	GMS/CU IN HR
DV/DL	=	3.43086 E-3	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.69805 E-5	
DP/DL	=	276.635	GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1090 DEGS F AFTER 1500 HOURS.

HOT END DIAMETER	=	.20949	INCHES
LENGTH	=	.395555	INCHES
L/A	=	11.6419	INCHES/SQ INCH
WEIGHT	=	1.7391	GRAMS
VOLUME	=	1.34397 E-2	CU INCHES
DENSITY	=	129.4	GRAMS/CU IN
DL/DT	=	-3.16561 E-6	INCHES/HOUR
D(D-HOT)/DT	=	3.50591 E-7	INCHES/HOUR
DV/DT	=	-5.18522 E-8	CU IN/HR
DP/DT	=	-7.11648 E-4	GMS/CU IN HR
DV/DL	=	1.63799 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.21478 E-5	
DP/DL	=	224.806	GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1090 DEGS F AFTER 2000 HOURS.

HOT END DIAMETER	=	.209733	INCHES
LENGTH	=	.394069	INCHES
L/A	=	11.5854	INCHES/SQ INCH
WEIGHT	=	1.73059	GRAMS
VOLUME	=	.013404	CU INCHES
DENSITY	=	129.11	GRAMS/CU IN
DL/DT	=	-2.77868 E-6	INCHES/HOUR
D(D-HOT)/DT	=	1.20878 E-7	INCHES/HOUR
DV/DT	=	-9.10134 E-8	CU IN/HR
DP/DT	=	-4.46971 E-4	GMS/CU IN HR
DV/DL	=	3.27542 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-7.31246 E-6	
DP/DL	=	160.857	GMS/INCH ↑ 4

8.3.2.2 N-Leg, TH=1220°F

N-TYPE PBTE AT TH=1220 DEGS F AFTER 0 HOURS.

HOT END DIAMETER	=	.206557	INCHES
LENGTH	=	.400624	INCHES
L/A	=	11.9686	INCHES/SQ INCH
WEIGHT	=	1.75733	GRAMS
VOLUME	=	1.34101 E-2	CU INCHES
DENSITY	=	131.046	GRAMS/CU IN
DL/DT	=	-1.21847 E-5	INCHES/HOUR
D(D-HOT)/DT	=	2.88501 E-6	INCHES/HOUR
DV/DT	=	-2.10845 E-7	CU IN/HR
DP/DT	=	-4.56183 E-3	GMS/CU IN HR
DV/DL	=	1.73041 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-4.51057 E-5	
DP/DL	=	374.39	GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1220 DEGS F AFTER 500 HOURS.

HOT END DIAMETER	=	.207896	INCHES
LENGTH	=	.395152	INCHES
L/A	=	11.7257	INCHES/SQ INCH
WEIGHT	=	1.7207	GRAMS
VOLUME	=	1.33165 E-2	CU INCHES
DENSITY	=	129.216	GRAMS/CU IN
DL/DT	=	-9.70403 E-6	INCHES/HOUR
D(D-HOT)/DT	=	2.47048 E-6	INCHES/HOUR
DV/DT	=	-1.63114 E-7	CU IN/HR
DP/DT	=	-2.75263 E-3	GMS/CU IN HR
DV/DL	=	1.68089 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-3.68664 E-5	
DP/DL	=	283.659	GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1220 DEGS F AFTER 1000 HOURS.

HOT END DIAMETER	=	.209028	INCHES
LENGTH	=	.39092	INCHES
L/A	=	11.5358	INCHES/SQ INCH
WEIGHT	=	1.6996	GRAMS
VOLUME	=	1.32473 E-2	CU INCHES
DENSITY	=	128.297	GRAMS/CU IN
DL/DT	=	-7.22336 E-6	INCHES/HOUR
D(D-HOT)/DT	=	2.05596 E-6	INCHES/HOUR
DV/DT	=	-1.13066 E-7	CU IN/HR
DP/DT	=	-9.17450 E-4	GMS/CU IN HR
DV/DL	=	1.56528 E-2	CU INCHES/INCH

D(L*AO/LO*A)/DT	=	-2.84207	E-5	
DP/DL	=	127.012		GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1220 DEGS F AFTER 1500 HOURS.

HOT END DIAMETER	=	.209952		INCHES
LENGTH	=	.387928		INCHES
L/A	=	11.3974		INCHES/SQ INCH
WEIGHT	=	1.69404		GRAMS
VOLUME	=	1.32037	E-2	CU INCHES
DENSITY	=	128.3		GRAMS/CU IN
DL/DT	=	-4.74269	E-6	INCHES/HOUR
D(D-HOT)/DT	=	1.64143	E-6	INCHES/HOUR
DV/DT	=	-6.12010	E-8	CU IN/HR
DP/DT	=	9.28890	E-4	GMS/CU IN HR
DV/DL	=	1.29043	E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.98162	E-5	
DP/DL	=	-195.857		GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1220 DEGS F AFTER 2000 HOURS.

HOT END DIAMETER	=	.210669		INCHES
LENGTH	=	.386177		INCHES
L/A	=	11.3096		INCHES/SQ INCH
WEIGHT	=	1.70401		GRAMS
VOLUME	=	1.31864	E-2	CU INCHES
DENSITY	=	120.225		GRAMS/CU IN
DL/DT	=	-2.26202	E-6	INCHES/HOUR
D(D-HOT)/DT	=	1.22691	E-6	INCHES/HOUR
DV/DT	=	-8.03399	E-9	CU IN/HR
DP/DT	=	2.76979	E-3	GMS/CU IN HR
DV/DL	=	3.55169	E-3	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.11057	E-5	
DP/DL	=	-1224.47		GMS/INCH ↑ 4

8.3.2.3 N-Leg, TH=1350°F

N-TYPE PBTE AT TH=1350 DEGS F AFTER 0 HOURS.

HOT END DIAMETER	=	.206921		INCHES
LENGTH	=	.394127		INCHES
L/A	=	11.7472		INCHES/SQ INCH
WEIGHT	=	1.72577		GRAMS
VOLUME	=	1.32233	E-2	CU INCHES
DENSITY	=	130.51		GRAMS/CU IN
DL/DT	=	-3.11811	E-5	INCHES/HOUR
D(D-HOT)/DT	=	8.34300	E-6	INCHES/HOUR

DV/DT	=	-4.86552	E-7	CU IN/HR
DP/DT	=	-1.04138	E-2	GMS/CU IN HR
DV/DL	=	1.56041	E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.21433	E-4	
DP/DL	=	333.979		GMS/INCH † 4

N-TYPE PBTE AT TH=1350 DEGS F AFTER 500 HOURS.

HOT END DIAMETER	=	.21075		INCHES
LENGTH	=	.378759		INCHES
L/A	=	11.0737		INCHES/SQ INCH
WEIGHT	=	1.63363		GRAMS
VOLUME	=	1.29549	E-2	CU INCHES
DENSITY	=	126.101		GRAMS/CU IN
DL/DT	=	-3.02921	E-5	INCHES/HOUR
D(D-HOT)/DT	=	6.97113	E-6	INCHES/HOUR
DV/DT	=	-5.85399	E-7	CU IN/HR
DP/DT	=	-7.22135	E-3	GMS/CU IN HR
DV/DL	=	1.93251	E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.14767	E-4	
DP/DL	=	238.39		GMS/INCH † 4

N-TYPE PBTE AT TH=1350 DEGS F AFTER 1000 HOURS.

HOT END DIAMETER	=	.213892		INCHES
LENGTH	=	.363835		INCHES
L/A	=	10.4733		INCHES/SQ INCH
WEIGHT	=	1.5584		GRAMS
VOLUME	=	1.26394	E-2	CU INCHES
DENSITY	=	123.297		GRAMS/CU IN
DL/DT	=	-2.94032	E-5	INCHES/HOUR
D(D-HOT)/DT	=	5.59926	E-6	INCHES/HOUR
DV/DT	=	-6.75080	E-7	CU IN/HR
DP/DT	=	-3.97981	E-3	GMS/CU IN HR
DV/DL	=	2.29594	E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.08218	E-4	
DP/DL	=	135.353		GMS/INCH † 4

N-TYPE PBTE AT TH=1350 DEGS F AFTER 1500 HOURS.

HOT END DIAMETER	=	.216349		INCHES
LENGTH	=	.349356		INCHES
L/A	=	9.93774		INCHES/SQ INCH
WEIGHT	=	1.50009		GRAMS
VOLUME	=	1.22814	E-2	CU INCHES
DENSITY	=	122.143		GRAMS/CU IN
DL/DT	=	-2.85142	E-5	INCHES/HOUR

D(D-HOT)/DT	=	4.22739 E-6	INCHES/HOUR
DV/DT	=	-7.55188 E-7	CU IN/HR
DP/DT	=	-6.07672 E-4	GMS/CU IN HR
DV/DL	=	2.64846 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.01748 E-4	
DP/DL	=	21.3112	GMS/INCH ↑ 4

N-TYPE PBTE AT TH=1350 DEGS F AFTER 2000 HOURS.

HOT END DIAMETER	=	.21812	INCHES
LENGTH	=	.335321	INCHES
L/A	=	9.46001	INCHES/SQ INCH
WEIGHT	=	1.4587	GRAMS
VOLUME	=	1.18859 E-2	CU INCHES
DENSITY	=	122.725	GRAMS/CU IN
DL/DT	=	-2.76252 E-5	INCHES/HOUR
D(D-HOT)/DT	=	2.85552 E-6	INCHES/HOUR
DV/DT	=	-8.25468 E-7	CU IN/HR
DP/DT	=	2.98133 E-3	GMS/CU IN HR
DV/DL	=	2.98809 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-9.53102 E-5	
DP/DL	=	-107.92	GMS/INCH ↑ 4

8.3.2.4

P-TYPE PBSNMNTE AT TH=1090 DEGS F AFTER 0 HOURS.

HOT END DIAMETER	=	.24587	INCHES
LENGTH	=	.398849	INCHES
L/A	=	8.40157	INCHES/SQ INCH
WEIGHT	=	2.08169	GRAMS
VOLUME	=	1.89346 E-2	CU INCHES
DENSITY	=	109.941	GRAMS/CU IN
DL/DT	=	-9.16075 E-7	INCHES/HOUR
D(D-HOT)/DT	=	2.01910 E-6	INCHES/HOUR
DV/DT	=	1.59826 E-7	CU IN/HR
DP/DT	=	-1.13001 E-3	GMS/CU IN HR
DV/DL	=	-.174468	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.30345 E-5	
DP/DL	=	1233.54	GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1090 DEGS F AFTER 500 HOURS.

HOT END DIAMETER	=	.246698	INCHES
LENGTH	=	.398408	INCHES
L/A	=	8.35586	INCHES/SQ INCH
WEIGHT	=	2.07943	GRAMS

VOLUME	=	1.89931 E-2	CU INCHES
DENSITY	=	109.466	GRAMS/CU IN
DL/DT	=	-8.48997 E-7	INCHES/HOUR
D(D-HOT)/DT	=	1.29511 E-6	INCHES/HOUR
DV/DT	=	8.60786 E-8	CU IN/HR
DP/DT	=	-7.70288 E-4	GMS/CU IN HR
DV/DL	=	-.101389	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-8.79333 E-6	
DP/DL	=	907.292	GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1090 DEGS F AFTER 1000 HOURS.

HOT END DIAMETER	=	.247165	INCHES
LENGTH	=	.398	INCHES
L/A	=	8.32799	INCHES/SQ INCH
WEIGHT	=	2.07648	GRAMS
VOLUME	=	1.90207 E-2	CU INCHES
DENSITY	=	109.17	GRAMS/CU IN
DL/DT	=	-7.81919 E-7	INCHES/HOUR
D(D-HOT)/DT	=	5.71112 E-7	INCHES/HOUR
DV/DT	=	1.21907 E-8	CU IN/HR
DP/DT	=	-4.16674 E-4	GMS/CU IN HR
DV/DL	=	-1.55908 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-4.57016 E-6	
DP/DL	=	532.887	GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1090 DEGS F AFTER 1500 HOURS.

HOT END DIAMETER	=	.247269	INCHES
LENGTH	=	.398626	INCHES
L/A	=	8.31775	INCHES/SQ INCH
WEIGHT	=	2.07284	GRAMS
VOLUME	=	1.90083 E-2	CU INCHES
DENSITY	=	109.049	GRAMS/CU IN
DL/DT	=	-7.14841 E-7	INCHES/HOUR
D(D-HOT)/DT	=	-1.52882 E-7	INCHES/HOUR
DV/DT	=	-6.16258 E-8	CU IN/HR
DP/DT	=	-6.62412 E-5	GMS/CU IN HR
DV/DL	=	.086209	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-3.53504 E-7	
DP/DL	=	92.6656	GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1090 DEGS F AFTER 2000 HOURS.

HOT END DIAMETER	=	.247012	INCHES
LENGTH	=	.397285	INCHES
L/A	=	8.32505	INCHES/SQ INCH

WEIGHT	=	2.0685	GRAMS
VOLUME	=	1.89591 E-2	CU INCHES
DENSITY	=	109.104	GRAMS/CU IN
DL/DT	=	-6.47763 E-7	INCHES/HOUR
D(D-HOT)/DT	=	-8.76876 E-7	INCHES/HOUR
DV/DT	=	-1.35160 E-7	CU IN/HR
DP/DT	=	2.83889 E-4	GMS/CU IN HR
DV/DL	=	.208657	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	3.86809 E-6	
DP/DL	=	-438.26	GMS/INCH ↑ 4

8.3.2.5 P-Leg, TH=1220°F

P-TYPE PBSNMNTE AT TH=1220 DEGS F AFTER 0 HOURS.

HOT END DIAMETER	=	.24626	INCHES
LENGTH	=	.398497	INCHES
L/A	=	8.38022	INCHES/SQ INCH
WEIGHT	=	2.07952	GRAMS
VOLUME	=	1.89494 E-2	CU INCHES
DENSITY	=	109.741	GRAMS/CU IN
DL/DT	=	-5.40961 E-6	INCHES/HOUR
D(D-HOT)/DT	=	5.65171 E-6	INCHES/HOUR
DV/DT	=	2.34445 E-7	CU IN/HR
DP/DT	=	-.00319	GMS/CU IN HR
DV/DL	=	-4.33385 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-3.95222 E-5	
DP/DL	=	589.692	GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1220 DEGS F AFTER 500 HOURS.

HOT END DIAMETER	=	.248608	INCHES
LENGTH	=	.39597	INCHES
L/A	=	8.23817	INCHES/SQ INCH
WEIGHT	=	2.06375	GRAMS
VOLUME	=	1.90324 E-2	CU INCHES
DENSITY	=	108.434	GRAMS/CU IN
DL/DT	=	-4.69925 E-6	INCHES/HOUR
D(D-HOT)/DT	=	3.73875 E-6	INCHES/HOUR
DV/DT	=	9.77428 E-8	CU IN/HR
DP/DT	=	-2.04698 E-3	GMS/CU IN HR
DV/DL	=	-2.07997 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-2.88710 E-5	
DP/DL	=	435.596	GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1220 DEGS F AFTER 1000 HOURS.

HOT END DIAMETER	=	.249999	INCHES
LENGTH	=	.393798	INCHES
L/A	=	8.14165	INCHES/SQ INCH
WEIGHT	=	2.05116	GRAMS
VOLUME	=	1.90474 E-2	CU INCHES
DENSITY	=	107.687	GRAMS/CU IN
DL/DT	=	-3.98889 E-6	INCHES/HOUR
D(D-HOT)/DT	=	1.82579 E-6	INCHES/HOUR
DV/DT	=	-3.76874 E-8	CU IN/HR
DP/DT	=	-9.41945 E-4	GMS/CU IN HR
DV/DL	=	9.44809 E-3	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-1.82799 E-5	
DP/DL	=	236.142	GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1220 DEGS F AFTER 1500 HOURS.

HOT END DIAMETER	=	.250433	INCHES
LENGTH	=	.391981	INCHES
L/A	=	8.08893	INCHES/SQ INCH
WEIGHT	=	2.04175	GRAMS
VOLUME	=	.018995	CU INCHES
DENSITY	=	107.489	GRAMS/CU IN
DL/DT	=	-3.27853 E-6	INCHES/HOUR
D(D-HOT)/DT	=	-8.71700 E-8	INCHES/HOUR
DV/DT	=	-1.71387 E-7	CU IN/HR
DP/DT	=	1.46480 E-4	GMS/CU IN HR
DV/DL	=	5.22755 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-7.70527 E-6	
DP/DL	=	-44.6784	GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1220 DEGS F AFTER 2000 HOURS.

HOT END DIAMETER	=	.249912	INCHES
LENGTH	=	.390519	INCHES
L/A	=	8.07919	INCHES/SQ INCH
WEIGHT	=	2.03552	GRAMS
VOLUME	=	1.88763 E-2	CU INCHES
DENSITY	=	107.835	GRAMS/CU IN
DL/DT	=	-2.56817 E-6	INCHES/HOUR
D(D-HOT)/DT	=	-2.00013 E-6	INCHES/HOUR
DV/DT	=	-3.02941 E-7	CU IN/HR
DP/DT	=	1.23901 E-3	GMS/CU IN HR
DV/DL	=	.11796	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	2.89612 E-6	
DP/DL	=	-482.448	GMS/INCH ↑ 4

8.3.2.6 P-Leg, TH=1350°F

P-TYPE PBSNMNTE AT TH=1350 DEGS F AFTER 0 HOURS.

HOT END DIAMETER	=	.246259	INCHES
LENGTH	=	.397477	INCHES
L/A	=	8.35525	INCHES/SQ INCH
WEIGHT	=	2.07191	GRAMS
VOLUME	=	1.89089 E-2	CU INCHES
DENSITY	=	109.573	GRAMS/CU IN
DL/DT	=	-2.20266 E-5	INCHES/HOUR
D(D-HOT)/DT	=	6.32483 E-6	INCHES/HOUR
DV/DT	=	-5.04990 E-7	CU IN/HR
DP/DT	=	-1.05917 E-2	GMS/CU IN HR
DV/DL	=	2.29264 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-8.41254 E-5	
DP/DL	=	480.86	GMS/INCH 4

P-TYPE PBSNMNTE AT TH=1350 DEGS F AFTER 500 HOURS.

HOT END DIAMETER	=	.248933	INCHES
LENGTH	=	.386596	INCHES
L/A	=	8.02911	INCHES/SQ INCH
WEIGHT	=	1.96006	GRAMS
VOLUME	=	1.86143 E-2	CU INCHES
DENSITY	=	105.299	GRAMS/CU IN
DL/DT	=	-2.14980 E-5	INCHES/HOUR
D(D-HOT)/DT	=	4.37038 E-6	INCHES/HOUR
DV/DT	=	-6.71288 E-7	CU IN/HR
DP/DT	=	-6.50499 E-3	GMS/CU IN HR
DV/DL	=	3.12256 E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-7.51539 E-5	
DP/DL	=	302.586	GMS/INCH 4

P-TYPE PBSNMNTE AT TH=1350 DEGS F AFTER 1000 HOURS.

HOT END DIAMETER	=	.250629	INCHES
LENGTH	=	.375979	INCHES
L/A	=	7.75023	INCHES/SQ INCH
WEIGHT	=	1.88014	GRAMS
VOLUME	=	1.82395 E-2	CU INCHES
DENSITY	=	103.08	GRAMS/CU IN
DL/DT	=	-2.09694 E-5	INCHES/HOUR
D(D-HOT)/DT	=	2.41593 E-6	INCHES/HOUR
DV/DT	=	-8.25974 E-7	CU IN/HR
DP/DT	=	-2.34604 E-3	GMS/CU IN HR
DV/DL	=	3.93895 E-2	CU INCHES/INCH

D(L*AO/LO*A)/DT	=	-6.62606	E-5	
DP/DL	=	111.879		GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1350 DEGS F AFTER 1500 HOURS.

HOT END DIAMETER	=	.251349		INCHES
LENGTH	=	.365627		INCHES
L/A	=	7.51431		INCHES/SQ INCH
WEIGHT	=	1.83213		GRAMS
VOLUME	=	1.77905	E-2	CU INCHES
DENSITY	=	102.984		GRAMS/CU IN
DL/DT	=	-2.04408	E-5	INCHES/HOUR
D(D-HOT)/DT	=	4.61480	E-7	INCHES/HOUR
DV/DT	=	-9.68153	E-7	CU IN/HR
DP/DT	=	2.00169	E-3	GMS/CU IN HR
DV/DL	=	4.73638	E-2	CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-5.73925	E-5	
DP/DL	=	-97.9264		GMS/INCH ↑ 4

P-TYPE PBSNMNTE AT TH=1350 DEGS F AFTER 2000 HOURS.

HOT END DIAMETER	=	.251091		INCHES
LENGTH	=	.355539		INCHES
L/A	=	7.31798		INCHES/SQ INCH
WEIGHT	=	1.81604		GRAMS
VOLUME	=	1.72736	E-2	CU INCHES
DENSITY	=	105.134		GRAMS/CU IN
DL/DT	=	-1.99122	E-5	INCHES/HOUR
D(D-HOT)/DT	=	-1.49297	E-6	INCHES/HOUR
DV/DT	=	-1.09712	E-6	CU IN/HR
DP/DT	=	6.66286	E-3	GMS/CU IN HR
DV/DL	=	.055098		CU INCHES/INCH
D(L*AO/LO*A)/DT	=	-4.84969	E-5	
DP/DL	=	-334.612		GMS/INCH ↑ 4

Figure 8.3-3. Leg Length Versus Time (N- and P-Type)

Figure 8.3-4. Leg Diameter Versus Time (N- and P-Type)

Figure 8.3-5. Leg/Area Ratio Versus Time (N- and P-Type)

Figure 8.3-6. Rate of Change of Leg Volume with Length Versus Time (N-Type)

Figure 8.3-7. Rate of Change of Leg Volume with Length Versus Time (P-Type)

Figure 8.3-8. Rate of Change of Leg Length Versus Time (N- and P-Type)

8.4 DISCUSSION AND CONCLUSIONS

8.4.1 GENERAL

In retrospect, we believe that this test program has accomplished a number of goals:

- a. Product specifications for SNAP-27 N-Type PbTe and P-Type PbSnMnTe have been developed on the basis of the results of an extensive test and test development program.
- b. An ingradient test fixture and test procedure have been developed which have demonstrated capability of making rapid, accurate and precise measurements of ingradient resistance and Seebeck voltage values of SNAP-27 PbTe and PbSnMnTe thermoelectric legs over extended periods of time and various junction temperatures without the need of special electrical contacts.
- c. Computerized techniques have been developed which handle the tasks of data reduction, normalization of performance data to specific operating junction temperatures, data sorting, and ultimate data plotting.
- d. A new rapid technique for the simultaneous determination of the thermoelectric properties S , K , and $K \cdot \rho$ of individual test specimens as functions of temperature has been developed and tested. These test results have been used to establish beginning of life specification limits on the thermoelectric properties of SNAP-27 materials.
- e. An ingradient soak test fixture and testing technique have been developed which have demonstrated the feasibility for large-scale ingradient testing of thermoelectric legs.
- f. A number of physical, chemical, and metallurgical characteristics of SNAP-27 legs have been determined and included in the specification for engineering references.
- g. Oxygen content in PbSnMnTe has been identified as a critical characteristic and acceptance limits established.

8.4.2 DISCUSSION OF FAILURE MODES

The long-term ingradient tests have not succeeded in universally demonstrating the degree of stability of performance of which the materials are believed capable. In general, the changes observed in resistance, Seebeck voltage and power with time were more severe and occurred more rapidly than the counterpart tests on instrumented legs conducted in hermetically sealed modules in other SNAP-27 tests. Thus, the question of ultimate stability of

the materials remains unresolved. The observed behavior strongly suggests that the performance changes are at least partially due to environmental influences. The drop in Seebeck voltage and resistance of the P-legs and the increase in power are consistent with the changes which have been observed on legs deliberately contaminated by water vapor. The P-leg property changes are confined to the hot end of the leg and as such are beneficial to a degree in that the S^2/ρ distribution along the leg length is improved over that of a freshly manufactured leg. That is, the leg beneficially segments itself during operation with respect to its ability to produce power. The effects of such changes on thermal conductivity have not been studied. It is not known, therefore, what the effect on efficiency is.

Some of the resistance change noted in both N- and P-legs is due to changes in the leg geometry with time and temperature. At 1090°F hot junction temperature, the N-leg geometry changes are due primarily to plastic deformation of the hot end since no significant change in leg volume with leg length was noted. The P-leg, however, shows definite evidence of swelling since dV/dL is negative and an order of magnitude higher than that observed for the N-legs. For both P- and N-legs at higher hot junction temperatures the leg geometry versus time and temperature is governed by the rate of sublimation. The rate of material loss due to sublimation was determined in the absence of junction electrode buttons and thermal insulation material surrounding the legs. The possible influence of these factors on sublimation rates is not known.

In addition to the changes in area and length of the legs with time and temperature, the rounding of the hot end and consequent loss of hot junction area with time and temperature further complicates the interpretations of the resistance measurements.

8.4.3 RECOMMENDATIONS FOR FUTURE DEVELOPMENT WORK

The feasibility of the TELPS ingradient testing scheme has been demonstrated. However, for greater reliability, longer life, and greater versatility of leg size and junction temperature control, additional developmental work should be done.

A primary problem area concerned the shorting of hot block heaters due to the formation of an ionic conductive lead silicate glass on the lava insulator separating the heater leads. The glass was formed from the reactions between the lava heater insulation and the PbTe or PbSnMnTe condensate. This problem was particularly troublesome at high hot junction

temperatures and was temporarily solved by physically removing the glass as rapidly as it formed after each test run. A more permanent solution appears possible by lowering the temperatures of the heater insulator by providing a 2-inch-long unheated portion of each heater cartridge and eliminating the radiation shields.

Improved control of atmosphere composition appears mandatory. The inclusion of a means for gettering the fixture prior to each test run to remove trace H_2O vapor and O_2 is recommended. Tests should be conducted to evaluate the effectiveness of such control means.

Modification of hot-block electrode configuration to accommodate larger diameter legs would increase the versatility of the test fixture. The influence of such a design change on fixture accuracy should be evaluated.

Materials selection for thermocouples, sheaths, electrodes, etc., should be reviewed with regard to their suitability for use with materials other than PbTe and PbSnMnTe thermoelectric legs.