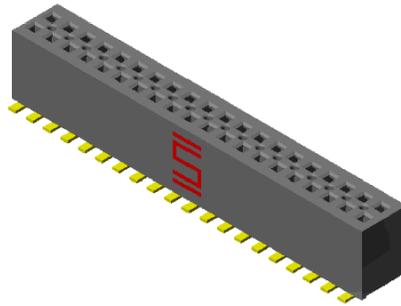




Project Number: NA		Tracking Code: TC0447--0556	
Requested by: Gary Lewis		Date: 11/16/2004	Product Rev: NA
Part #: FLE-130-01-G-DV-A		Lot #: 262282	Tech: Troy Cook Eng: John Tozier
Part description: Low Profile Socket Strip			Qty to test: 25
Test Start: 07/30/2004	Test Completed: 3/28/2005		



DVT

PART DESCRIPTION

FLE-130-01-G-DV-A

Mated with FTSH-130-02-L-DV-A

CERTIFICATION

All instruments and measuring equipment were calibrated to National Institute for Standards and Technology (NIST) traceable standards according to ISO 10012-1 and ANSI/NCSL 2540-1, as applicable.

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SCOPE

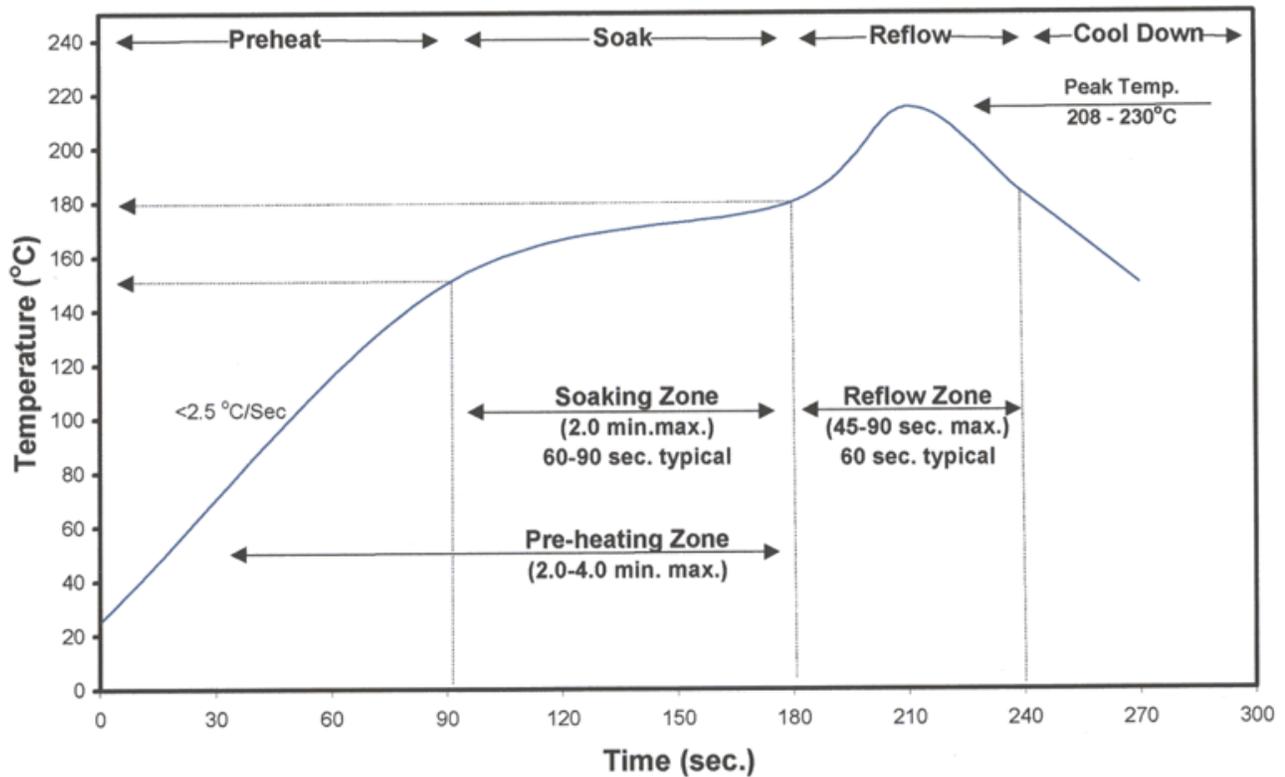
To perform the following tests: DVT with LLCR durability at 50 cycles.

APPLICABLE DOCUMENTS

Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

- 1) All materials were manufactured in accordance with the applicable product specification.
- 2) All test samples were identified and encoded to maintain traceability throughout the test sequences.
- 3) After soldering, the parts to be used for LLCR and DWV/IR testing were cleaned according to TLWI-0001.
- 4) Either an automated cleaning procedure or an ultrasonic cleaning procedure may be used.
- 5) The automated procedure is used with aqueous compatible soldering materials.
- 6) The ultrasonic procedure can be used with either aqueous or non-aqueous soldering components and follows:
 - a. Sample test boards are to be ultrasonically cleaned after test lead attachment, preparation and/or soldering.
 - b. Sample test boards are immersed into Branson 3510 cleaner containing Kyzen Ionox HC1 (or equivalent) with the following conditions:
 - i. Temperature: -----55° C +/- 5° C
 - ii. Frequency:-----40 KHz
 - iii. Immersion Time: ---5 to 10 Minutes
 - c. Sample test boards are removed and placed into the Branson 3510 cleaner containing deionized water with the following conditions:
 - i. Temperature: -----55° C +/- 5° C
 - ii. Frequency:-----40 KHz
 - iii. Immersion Time: ---5 to 10 Minutes
 - d. Sample test boards are removed and placed in a beaker positioned on a hot plate with a magnetic stirrer containing deionized water warmed to 55° C +/- 5° C for 1/2 to 1 minute.
 - e. Upon removal, the sample boards are rinsed for 1/2 to 1 minute at room temperature with free flowing deionized water.
 - f. After the final rinse, the sample test boards are dried in an air-circulating oven for 10 to 15 minutes at 50° C +/- 5° C.
 - g. Sample test boards are then allowed to set and recover to room ambient condition prior to testing.
- 7) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
- 8) Any additional preparation will be noted in the individual test sequences.
- 9) Solder Information: SN 63-P3-NC421-O, Lot # 57473
- 10) Re-Flow Time/Temp: See accompanying profile.
- 11) Internal Test PCBs used: 100-169-TST-1A

OVEN PROFILE (Soldering Parts to Test Boards)**Standard Solder Paste Reflow Profile
for Kester Paste Containing
Alloys: Sn63Pb37 or Sn62Pb36Ag02**

FLOWCHARTS

TEST STEP	GROUP A 1 board min 6 Contacts in series, clustered if possible
01	CCC

Tabulate calculated current at RT, 85° C, 95° C and 115° C
after derating 20% and based on 125° C
CCC, Temp rise = EIA-364-70

TEST STEP	GROUP A 10 Boards	GROUP B1 Individual Contacts (30 min Setup Approve	GROUP B2 Individual Contacts (30 min Setup Approve
01	Contact Gaps	Normal Force	Thermal Age
02	Mating / Unmating	Data Review	Normal Force
03	Data Review		
04	50 Cycles		
05	Mating / Unmating		
06	Contact Gaps		
07	Data Review		
08	Thermal Aging (Mated)		
09	Mating / Unmating		
10	Contact Gaps		
11	Data Review		
12	Humidity (Mated)		
13	Contact Gaps		
14	Mating / Unmating		

Thermal Aging = EIA-364-17, Test Condition 4, 105 deg C;

Time Condition 'B' (250 hours)

Humidity =EIA-364-31, Test Condition B (240 Hours)

and Method III (+25 ° C to +65 ° C @ 90%RH to 98% RH)

ambient pre-condition and delete steps 7a and 7b

Mating/Un-Mating Forces = EIA-364-13

Normal Force = EIA-364-04

Contact Gaps/Height - No standard method. Usually measured optically

FLOWCHARTS Continued

TEST STEP	GROUP A 2 Boards Ambient	GROUP B1 2 Boards Ambient	GROUP B2 2 Boards Thermal	GROUP B3 2 Boards Humidity
01	IR	DWV/Working Voltage	Thermal Aging	Humidity
02	Data Review		DWV/Working Voltage	DWV/Working Voltage
03	Thermal Aging			
04	IR			
05	Data Review			
06	Humidity			
07	IR			

**Thermal Aging = EIA-364-17, Test Condition 4, 105 deg C;
Time Condition 'B' (250 hours)**

**Humidity =EIA-364-31, Test Condition B (240 Hours)
and Method III (+25 ° C to +65 ° C @ 90%RH to 98% RH)
ambient pre-condition and delete steps 7a and 7b**

IR = EIA-364-21

DWV = EIA-364-20

TEST STEP	GROUP A 200 Points 50 Cycles
01	LLCR-1
02	Data Review
03	50 Cycles
04	LLCR-2
05	Data Review
06	Thermal Age
07	LLCR-3
08	Data Review
09	Cyclic Humidity
10	LLCR-4

**Thermal Aging = EIA-364-17, Test Condition 4, 105 deg C;
Time Condition 'B' (250 hours)**

**Humidity =EIA-364-31, Test Condition B (240 Hours)
and Method III (+25 ° C to +65 ° C @ 90%RH to 98% RH)
ambient pre-condition and delete steps 7a and 7b**

LLCR = EIA-364-23, LLCR

use Keithley 580 in the dry circuit mode, 10 mA Max

FLOWCHARTS Continued

TEST STEP	GROUP A 200 Points (min)
01	LLCR-1
02	Gas Tight
03	LLCR-2

Gas Tight = EIA-364-36A

LLCR = EIA-364-23, LLCR

use Keithley 580 in the dry circuit mode, 10 mA Max

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

THERMAL:

- 1) EIA-364-17, *Temperature Life with or without Electrical Load Test Procedure for Electrical Connectors*.
- 2) Test Condition 4 at 105° C.
- 3) Test Time Condition B for 250 hours.
- 4) Connectors are mated and pre-conditioned at ambient.

HUMIDITY:

- 1) Reference document: EIA-364-31, *Humidity Test Procedure for Electrical Connectors*.
- 2) Test Condition B, 240 Hours.
- 3) Method III, +25° C to + 65° C, 90% to 98% Relative Humidity excluding sub-cycles 7a and 7b.
- 4) Connectors are mated and pre-conditioned at ambient.

TEMPERATURE RISE (Current Carrying Capacity, CCC):

- 1) EIA-364-70, *Temperature Rise versus Current Test Procedure for Electrical Connectors and Sockets*.
- 2) When current passes through a contact, the temperature of the contact increases as a result of I^2R (resistive) heating.
- 3) The number of contacts being investigated plays a significant part in power dissipation and therefore temperature rise.
- 4) The size of the temperature probe can affect the measured temperature.
- 5) Copper traces on PC boards will contribute to temperature rise:
 - a. Self heating (resistive)
 - b. Reduction in heat sink capacity affecting the heated contacts
- 6) A de-rating curve, usually 20%, is calculated.
- 7) Calculated de-rated currents at three temperature points are reported:
 - a. Ambient
 - b. 85° C
 - c. 95° C
 - d. 115° C
- 8) Typically, neighboring contacts (in close proximity to maximize heat build up) are energized.
- 9) The thermocouple (or temperature measuring probe) will be positioned at a location to sense the maximum temperature in the vicinity of the heat generation area.
- 10) A computer program, *TR 803.exe*, ensures accurate stability for data acquisition.
- 11) Hook-up wire cross section is larger than the cross section of any connector leads/PC board traces, jumpers, etc.
- 12) Hook-up wire length is longer than the minimum specified in the referencing standard.

CONTACT GAPS:

- 1) Gaps between mating contact surfaces were measured before and after stressing the contacts (e.g. thermal aging, mechanical cycling, etc.).
- 2) Typically, all contacts on the connector are measured.

ATTRIBUTE DEFINITIONS Continued**MATING/UNMATING:**

- 1) Reference document: EIA-364-13, *Mating and Unmating Forces Test Procedure for Electrical Connectors*.
- 2) The full insertion position was to within 0.003" to 0.004" of the plug bottoming out in the receptacle to prevent damage to the system under test.
- 3) One of the mating parts is secured to a floating X-Y table to prevent damage during cycling.

NORMAL FORCE (FOR CONTACTS TESTED IN THE HOUSING):

- 1) Reference document: EIA-364-04, *Normal Force Test Procedure for Electrical Connectors*.
- 2) The contacts shall be tested in the connector housing.
- 3) If necessary, a "window" shall be made in the connector body to allow a probe to engage and deflect the contact at the same attitude and distance (plus 0.05 mm [0.002"]) as would occur in actual use.
- 4) The connector housing shall be placed in a holding fixture that does not interfere with or otherwise influence the contact force or deflection.
- 5) Said holding fixture shall be mounted on a floating, adjustable, X-Y table on the base of the Dillon TC², computer controlled test stand with a deflection measurement system accuracy of 5.0 µm (0.0002").
- 6) The nominal deflection rate shall be 5 mm (0.2")/minute.
- 7) Unless otherwise noted a minimum of five contacts shall be tested.
- 8) The force/deflection characteristic to load and unload each contact shall be repeated five times.
- 9) The system shall utilize the TC² software in order to acquire and record the test data.
- 10) The permanent set of each contact shall be measured within the TC² software.
- 11) The acquired data shall be graphed with the deflection data on the X-axis and the force data on the Y-axis and a print out will be stored with the Tracking Code paperwork.

INSULATION RESISTANCE (IR):

To determine the resistance of insulation materials to leakage of current through or on the surface of these materials when a DC potential is applied.

- 1) PROCEDURE:
 - a. Reference document: EIA-364-21, *Insulation Resistance Test Procedure for Electrical Connectors*.
 - b. Test Conditions:
 - i. Between Adjacent Contacts
 - ii. Electrification Time 2.0 minutes
 - iii. Test Voltage (500 VDC) corresponds to calibration settings for measuring resistances.
- 2) MEASUREMENTS:
- 3) When the specified test voltage is applied (VDC), the insulation resistance shall not be less than 5000 megohms.

ATTRIBUTE DEFINITIONS Continued**DIELECTRIC WITHSTANDING VOLTAGE (DWV):**

To determine if the sockets can operate at its rated voltage and withstand momentary over potentials due to switching, surges, and other similar phenomenon. Separate samples are used to evaluate the effect of environmental stresses so not to influence the readings from arcing that occurs during the measurement process.

- 1) PROCEDURE:
 - a. Reference document: EIA-364-20, *Withstanding Voltage Test Procedure for Electrical Connectors*.
 - b. Test Conditions:
 - i. Between Adjacent Contacts
 - ii. Rate of Application 500 V/Sec
 - iii. Test Voltage (VAC) until breakdown occurs
- 2) MEASUREMENTS/CALCULATIONS
 - a. The breakdown voltage shall be measured and recorded.
 - b. The dielectric withstanding voltage shall be recorded as 75% of the minimum breakdown voltage.
 - c. The working voltage shall be recorded as one-third (1/3) of the dielectric withstanding voltage (one-fourth of the breakdown voltage).

LLCR:

- 1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 3) The following guidelines are used to categorize the changes in LLCR as a result from stressing
 - a. $\leq +5.0$ mOhms: ----- Stable
 - b. $+5.1$ to $+10.0$ mOhms:----- Minor
 - c. $+10.1$ to $+15.0$ mOhms: ----- Acceptable
 - d. $+15.1$ to $+50.0$ mOhms: ----- Marginal
 - e. $+50.1$ to $+2000$ mOhms: ----- Unstable
 - f. $>+2000$ mOhms:----- Open Failure

GAS TIGHT:

To provide method for evaluating the ability of the contacting surfaces in preventing penetration of harsh vapors which might lead to oxide formation that may degrade the electrical performance of the contact system.

- 1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 3) The following guidelines are used to categorize the changes in LLCR as a result from stressing
 - a. $\leq +5.0$ mOhms: ----- Stable
 - b. $+5.1$ to $+10.0$ mOhms:----- Minor
 - c. $+10.1$ to $+15.0$ mOhms: ----- Acceptable
 - d. $+15.1$ to $+50.0$ mOhms: ----- Marginal
 - e. $+50.1$ to $+2000$ mOhms: ----- Unstable
 - f. $>+2000$ mOhms:----- Open Failure
- 4) Procedure:
 - a. Reference document: EIA-364-36, *Test Procedure for Determination of Gas-Tight Characteristics for Electrical Connectors, Sockets and/or Contact Systems*.
 - b. Test Conditions:
 - i. Class II--- Mated pairs of contacts assembled to their plastic housings.
 - ii. Reagent grade Nitric Acid shall be used of sufficient volume to saturate the test chamber

- iii. The ratio of the volume of the test chamber to the surface area of the acid shall be less than 10.
- iv. The chamber shall be saturated with the vapor for at least 15 minutes before samples are added.
- v. Exposure time, 55 to 65 minutes.
- vi. The samples shall be no closer to the chamber walls than 1 inches and no closer to the surface of the acid than 3 inches.
- vii. The samples shall be dried after exposure for a minimum of 1 hour.
- viii. Drying temperature 50^o C
- ix. The final LLCR shall be conducted within 1 hour after drying.

RESULTS**Temperature Rise, CCC at a 20% de-rating**

- CCC for a 30°C Temperature Rise -----2.0 A with 6 adjacent contacts powered

Contact Gaps

- **Initial**
 - **Min** -----0.0080 in.
 - **Max** -----0.0104 in.
- **After 50 Cycles**
 - **Min** -----0.0079 in.
 - **Max** -----0.0159 in.
- **Thermal**
 - **Min** -----0.0113 in.
 - **Max** -----0.0156 in.
- **Humidity**
 - **Min** -----0.0117 in.
 - **Max** -----0.0190 in.

Mating – Unmating Forces

- **Initial**
 - **Mating**
 - **Min** -----6.8 Lbs.
 - **Max** -----8.7 Lbs.
 - **Unmating**
 - **Min** -----3.5 Lbs.
 - **Max** -----5.6 Lbs.
- **After 50 Cycles**
 - **Mating**
 - **Min** -----7.3 Lbs.
 - **Max** -----8.7 Lbs.
 - **Unmating**
 - **Min** -----4.0 Lbs.
 - **Max** -----6.1 Lbs.
- **Thermal**
 - **Mating**
 - **Min** -----3.0 Lbs.
 - **Max** -----7.9 Lbs.
 - **Unmating**
 - **Min** -----2.2 Lbs.
 - **Max** -----4.8 Lbs.
- **Humidity**
 - **Mating**
 - **Min** -----2.9 Lbs.
 - **Max** -----5.2 Lbs.
 - **Unmating**
 - **Min** -----2.6 Lbs.
 - **Max** -----4.6 Lbs.

RESULTS Continued**Normal Force at 0.005" deflection**

- **Initial**
 - **Min**-----30.72 gr. **Set** ---- 0.0005"
 - **Max**-----32.33 gr. **Set** ---- 0.0008"
- **Thermal**
 - **Min**-----26.08 gr.
 - **Max**-----27.30 gr.

Insulation Resistance minimums, IR

- **Initial**
 - **Mated**----- 10,000 Meg Ω ----- Pass
 - **Unmated** -----8,000 Meg Ω
- **Thermal**
 - **Mated**----- 50,000 Meg Ω
 - **Unmated** ----- 50,000 Meg Ω
- **Humidity**
 - **Mated**----- 15,000 Meg Ω
 - **Unmated** ----- 15,000 Meg Ω

Dielectric Withstanding Voltage minimums, DWV

- **Initial**
 - **Breakdown**
 - **Mated**----- 1200 VAC
 - **Unmated**----- 2500 VAC
 - **DWV**
 - **Mated**-----900 VAC
 - **Unmated**----- 1875 VAC
 - **Working voltage**
 - **Mated**-----300 VAC
 - **Unmated**-----625 VAC
- **Thermal**
 - **Breakdown**
 - **Mated**----- 2000 VAC
 - **Unmated**----- 2400 VAC
 - **DWV**
 - **Mated**----- 1500 VAC
 - **Unmated**----- 1800 VAC
 - **Working voltage**
 - **Mated**-----500 VAC
 - **Unmated**-----600 VAC
- **Humidity**
 - **Breakdown**
 - **Mated**----- 2100 VAC
 - **Unmated**----- 2100 VAC
 - **DWV**
 - **Mated**----- 1575 VAC
 - **Unmated**----- 1575 VAC
 - **Working voltage**
 - **Mated**-----525 VAC
 - **Unmated**-----525 VAC

RESULTS Continued**LLCR Durability (200 LLCR test points)**

- **Initial**----- 13.8 mOhms Max
- **Durability, 50 Cycles**
 - **<= +5.0 mOhms**-----200 Points----- Stable
 - **+5.1 to +10.0 mOhms**-----0 Points----- Minor
 - **+10.1 to +15.0 mOhms**-----0 Points----- Acceptable
 - **+15.1 to +50.0 mOhms**-----0 Points----- Marginal
 - **+50.1 to +2000 mOhms**-----0 Points----- Unstable
 - **>+2000 mOhms**-----0 Points----- Open Failure
- **Thermal**
 - **<= +5.0 mOhms**-----195 Points----- Stable
 - **+5.1 to +10.0 mOhms**-----5 Points----- Minor
 - **+10.1 to +15.0 mOhms**-----0 Points----- Acceptable
 - **+15.1 to +50.0 mOhms**-----0 Points----- Marginal
 - **+50.1 to +2000 mOhms**-----0 Points----- Unstable
 - **>+2000 mOhms**-----0 Points----- Open Failure
 -
- **Humidity**
 - **<= +5.0 mOhms**-----197 Points----- Stable
 - **+5.1 to +10.0 mOhms**-----3 Points----- Minor
 - **+10.1 to +15.0 mOhms**-----0 Points----- Acceptable
 - **+15.1 to +50.0 mOhms**-----0 Points----- Marginal
 - **+50.1 to +2000 mOhms**-----0 Points----- Unstable
 - **>+2000 mOhms**-----0 Points----- Open Failure

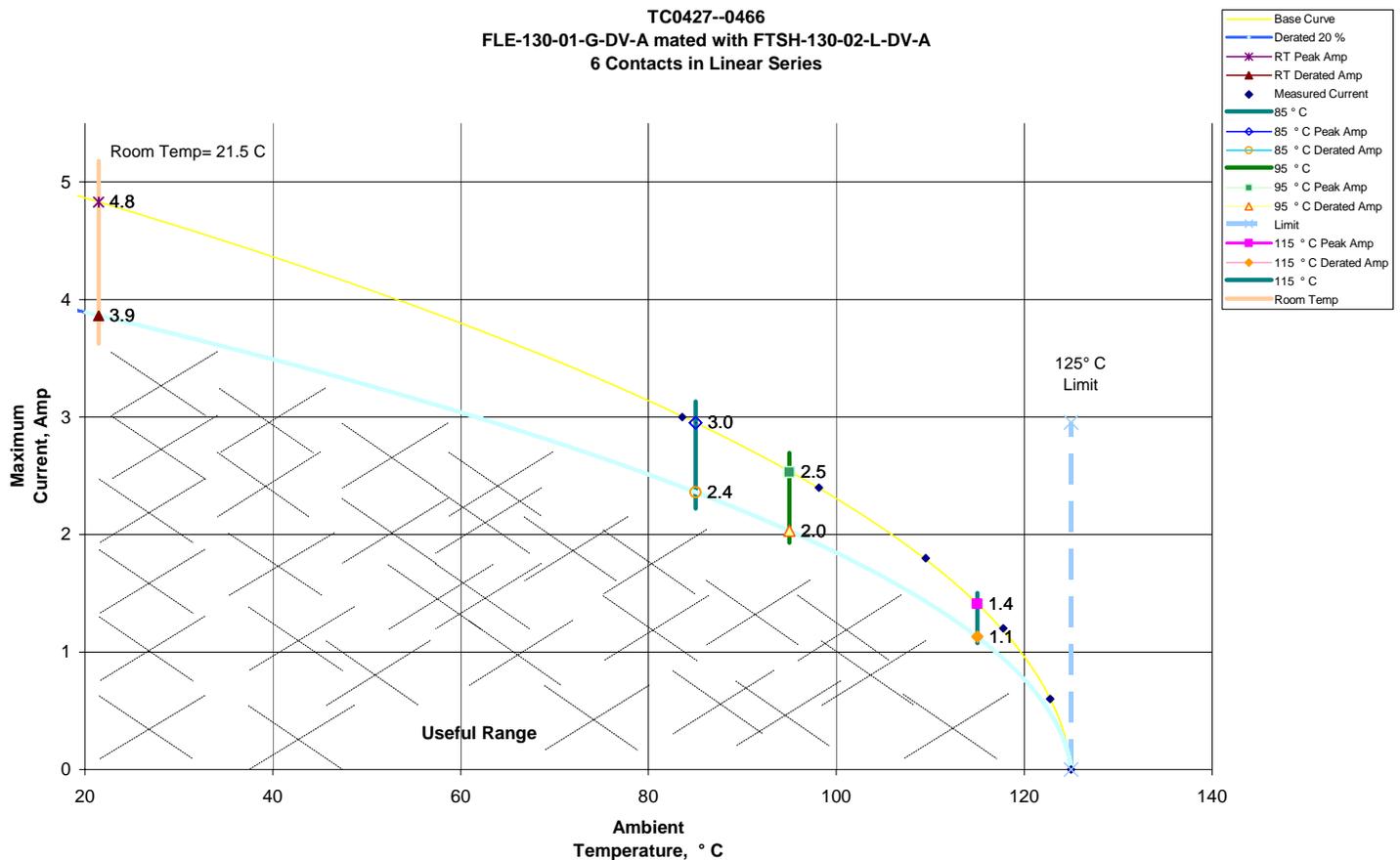
LLCR Gas Tight (200 LLCR test points)

- **Initial**----- 17.0 mOhms Max
- **Gas-Tight**
 - **<= +5.0 mOhms**-----191 Points----- Stable
 - **+5.1 to +10.0 mOhms**-----8 Points----- Minor
 - **+10.1 to +15.0 mOhms**-----1 Points----- Acceptable
 - **+15.1 to +50.0 mOhms**-----0 Points----- Marginal
 - **+50.1 to +2000 mOhms**-----0 Points----- Unstable
 - **>+2000 mOhms**-----0 Points----- Open Failure

DATA SUMMARIES

TEMPERATURE RISE (Current Carrying Capacity, CCC):

- 1) High quality thermocouples whose temperature slopes track one another were used for temperature monitoring.
- 2) The thermocouples were placed at a location to sense the maximum temperature generated during testing.
- 3) Temperature readings recorded are those for which three successive readings, 15 minutes apart, differ less than 1° C (computer controlled data acquisition).
- 4) Adjacent contacts were powered:
 - a. Linear configuration with six adjacent conductors/contacts powered



DATA SUMMARIES Continued

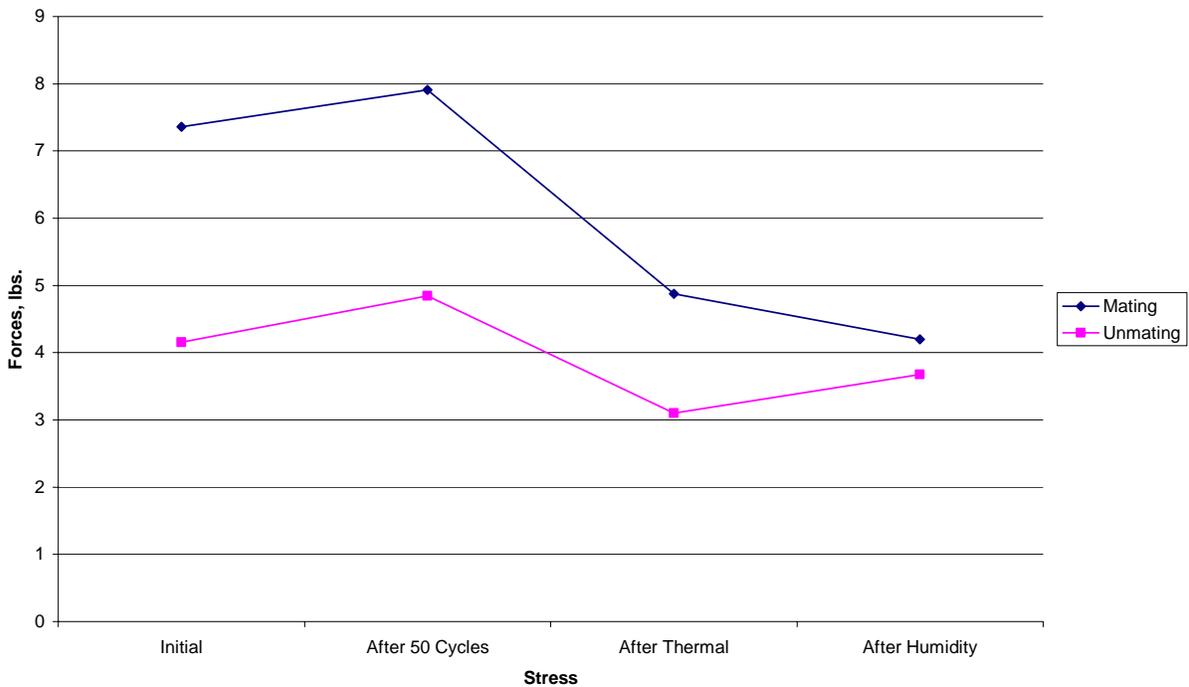
CONTACT GAPS:

	Measurements in inches			
	Initial	Mating	Thermal	Humidity
<i>Minimum</i>	0.0080	0.0079	0.0113	0.0117
<i>Maximum</i>	0.0104	0.0159	0.0156	0.0190
<i>Average</i>	0.0093	0.0121	0.0139	0.0146
<i>St. Dev.</i>	0.0007	0.0013	0.0008	0.0010
<i>Count</i>	60	120	79	64

MATING/UNMATING:

	Initial				After 50 Cycles			
	Mating		Unmating		Mating		Unmating	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
Minimum	103.5	6.8	55.2	3.5	116.5	7.3	63.2	4.0
Maximum	138.4	8.7	89.8	5.6	138.9	8.7	96.8	6.1
Average	117.7	7.4	66.5	4.2	126.5	7.9	77.5	4.8
	After Thermal				After Humidity			
	Mating		Unmating		Mating		Unmating	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
Minimum	48.5	3.0	34.9	2.2	46.9	2.9	41.3	2.6
Maximum	126.7	7.9	77.4	4.8	83.8	5.2	73.4	4.6
Average	78.0	4.9	49.6	3.1	67.2	4.2	58.8	3.7

Mating/Unmating Compare Averages

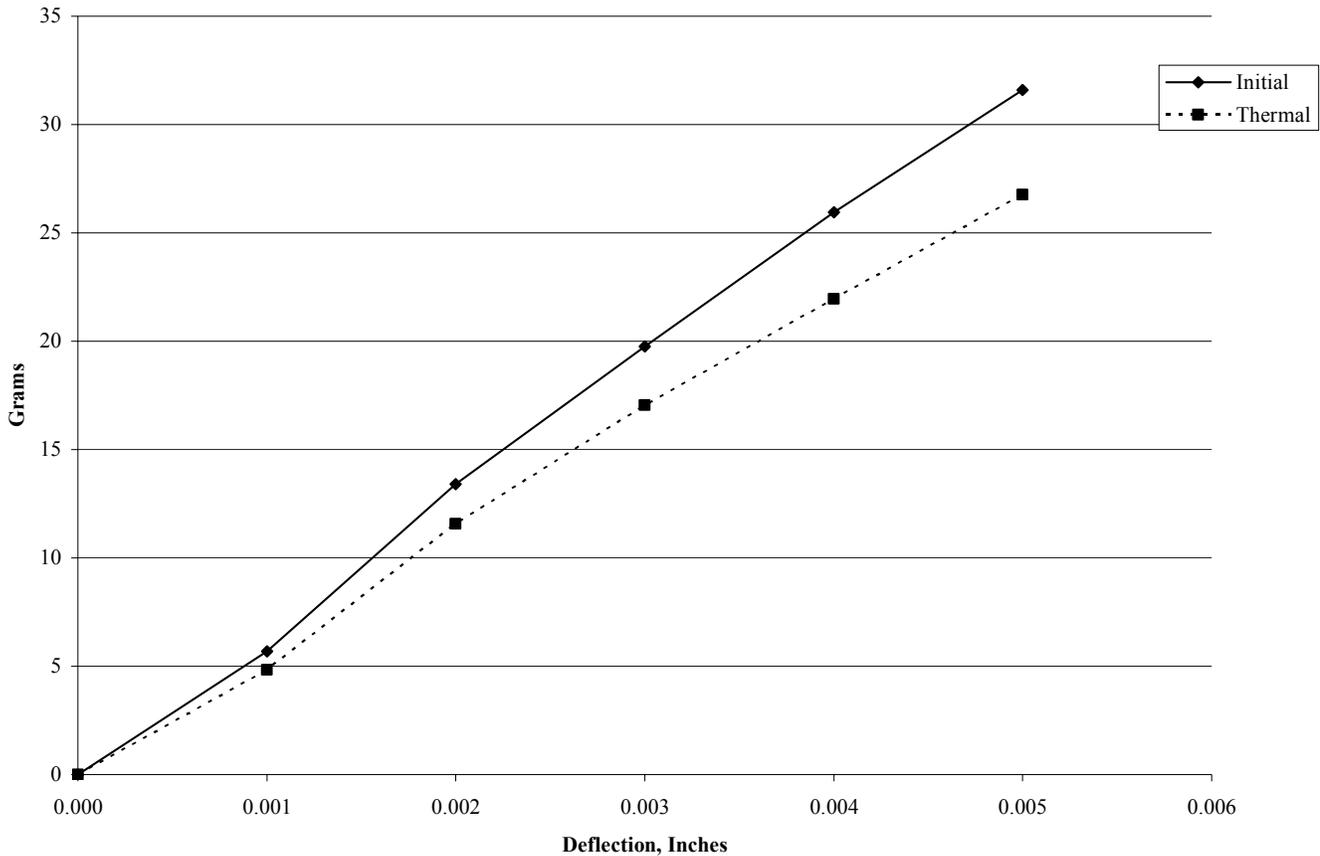


DATA SUMMARIES Continued**NORMAL FORCE (FOR CONTACTS TESTED IN THE HOUSING):**

- 1) Calibrated force gauges are used along with computer controlled positioning equipment.
- 2) Typically, 8-10 readings are taken and the averages reported.

Initial	Deflections in inches Forces in Grams					
	<u>0.001</u>	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>	<u>SET</u>
Averages	5.70	13.41	19.76	25.94	31.59	0.0006
Min	5.02	12.85	19.22	25.28	30.72	0.0005
Max	6.81	14.75	20.64	26.88	32.33	0.0008
St. Dev	0.77	0.90	0.63	0.68	0.67	0.0001

Thermal	Deflections in inches, Forces in Grams				
	<u>0.001</u>	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>
Averages	4.84	11.58	17.06	21.96	26.76
Min	4.30	10.87	16.47	21.31	26.08
Max	5.55	12.72	18.00	22.48	27.30
St. Dev	0.51	0.75	0.66	0.49	0.50

Normal Force Compare

DATA SUMMARIES Continued**INSULATION RESISTANCE (IR):**

Electrification Time <i>Two (2) minutes</i>						
Initial, Meg Ohms		Thermal, Meg Ohms		Humidity, Meg Ohms		
Mated	Unmated	Mated	Unmated	Mated	Unmated	
<u>Insulation Resistance</u>	<u>Insulation Resistance</u>	<u>Insulation Resistance</u>	<u>Insulation Resistance</u>	<u>Insulation Resistance</u>	<u>Insulation Resistance</u>	
Average	17500	16500	50000	50000	20000	15000
Min	10000	8000	50000	50000	15000	15000
Max	25000	25000	50000	50000	25000	15000

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

Voltage Rate 500 VAC Per Sec.

Test Voltage Until Breakdown Occurs

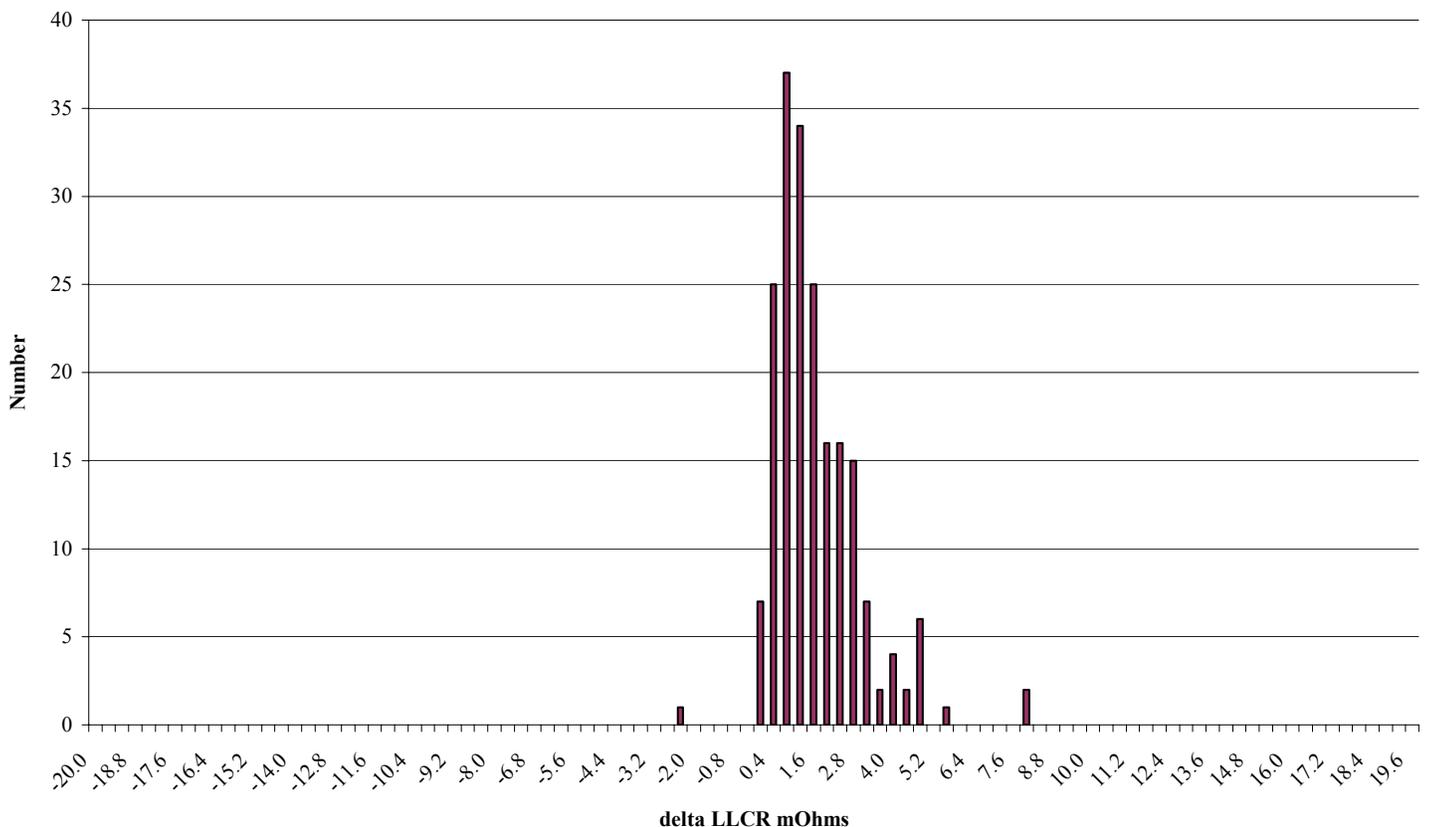
Initial, VAC Mated			Initial, VAC Unmated			
<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	
Average	1200	900	300	2500	1875	625
Min	1200	900	300	2500	1875	625
Max	1200	900	300	2500	1875	625
Thermal, VAC Mated			Thermal, VAC Unmated			
<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	
Average	2000	1500	500	2400	1800	600
Min	2000	1500	500	2400	1800	600
Max	2000	1500	500	2400	1800	600
Humidity, VAC Mated			Humidity, VAC Unmated			
<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	
Average	2100	1575	525	2100	1575	525
Min	2100	1575	525	2100	1575	525
Max	2100	1575	525	2100	1575	525

DATA SUMMARIES Continued**LLCR:**

- 1) A total of 200 points were measured.
- 2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. $\leq +5.0$ mOhms: ----- Stable
 - b. $+5.1$ to $+10.0$ mOhms:----- Minor
 - c. $+10.1$ to $+15.0$ mOhms: ----- Acceptable
 - d. $+15.1$ to $+50.0$ mOhms: ----- Marginal
 - e. $+50.1$ to $+2000$ mOhms ----- Unstable
 - f. $>+2000$ mOhms:----- Open Failure

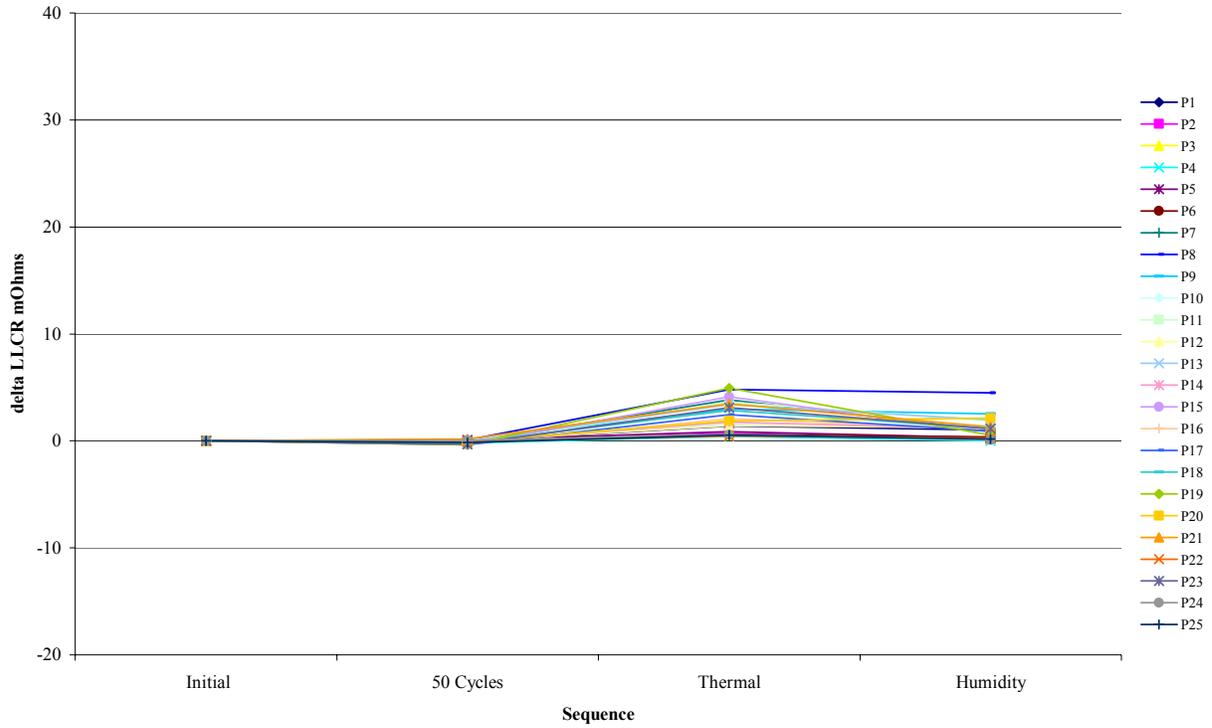
mOhm values	Actual Initial	Delta 50 Cycles	Delta Thermal	Delta Humidity
Average	10.7	0.0	1.5	1.5
St. Dev.	0.4	0.3	1.4	1.3
Min	10.0	-2.7	-2.1	-2.5
Max	13.8	1.6	7.0	7.8
Count	200	200	200	200

**TC0447--0556, FLE/FTSH
Humidity**

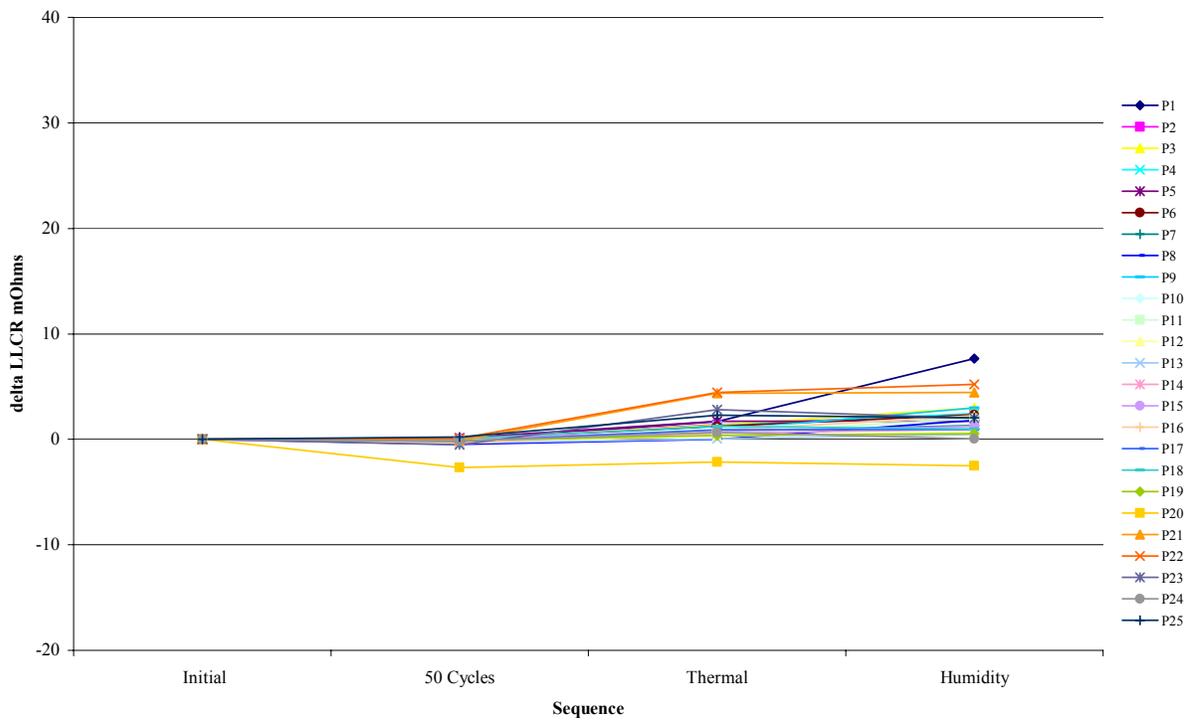


DATA SUMMARIES Continued

Board #1

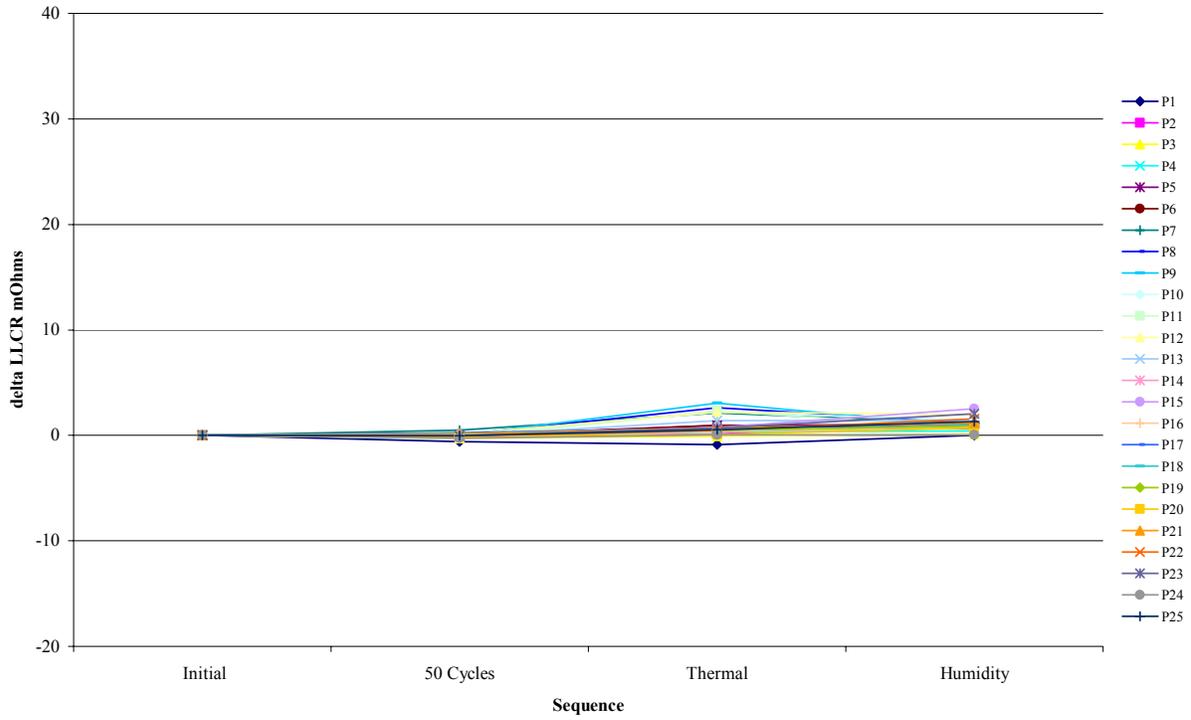


Board #2

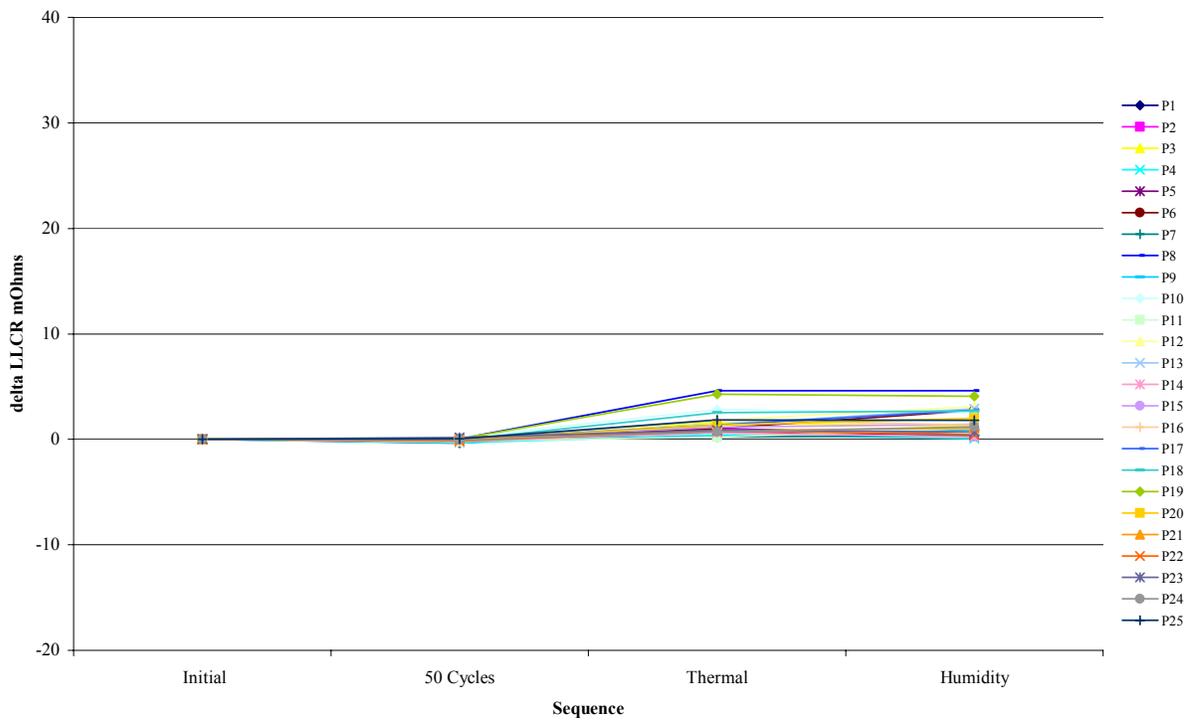


DATA SUMMARIES Continued

Board #3

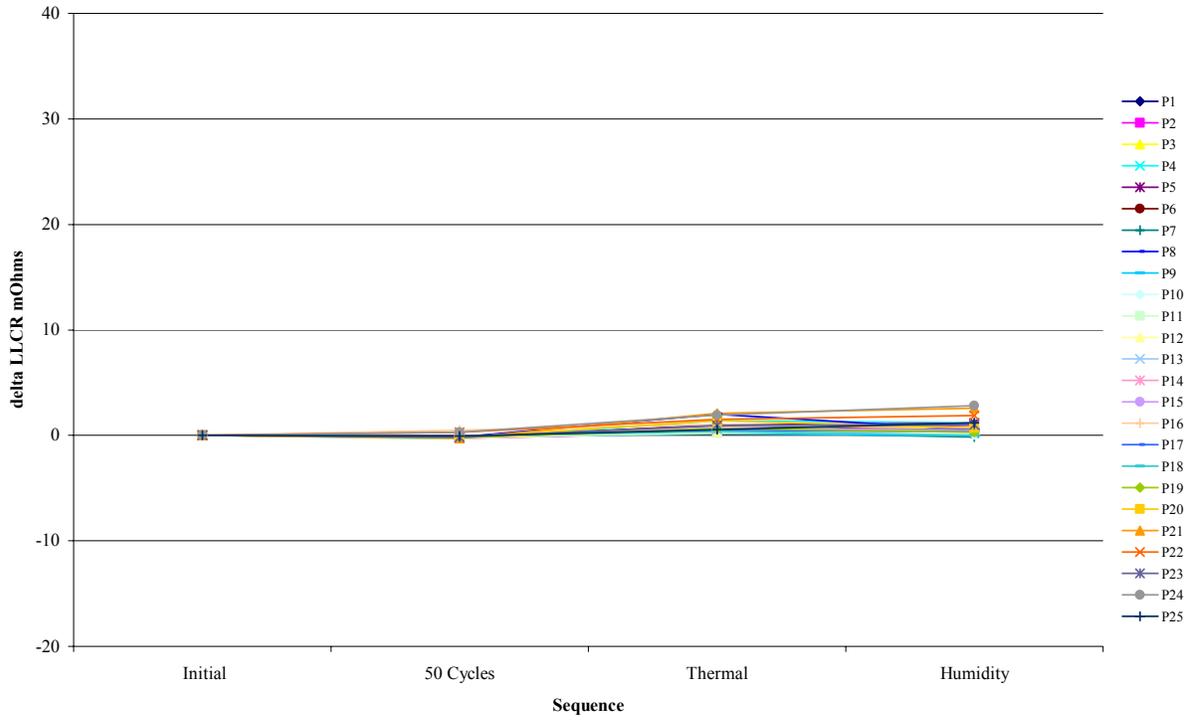


Board #4

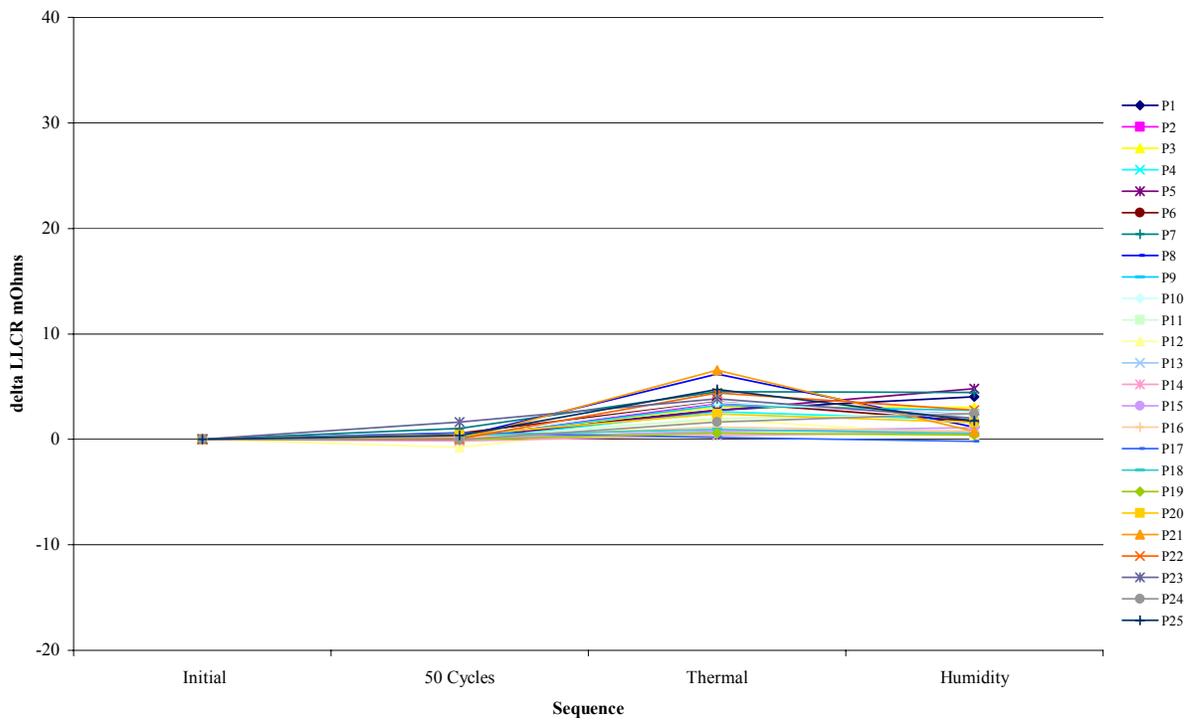


DATA SUMMARIES Continued

Board #5

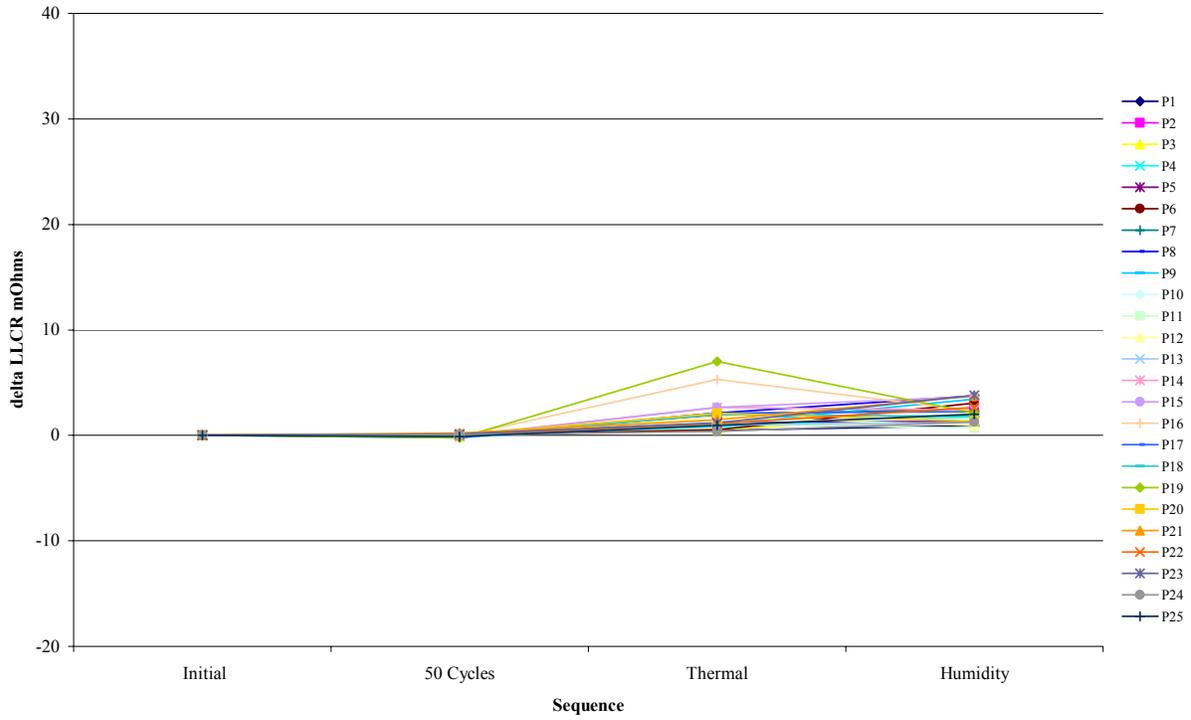


Board #6

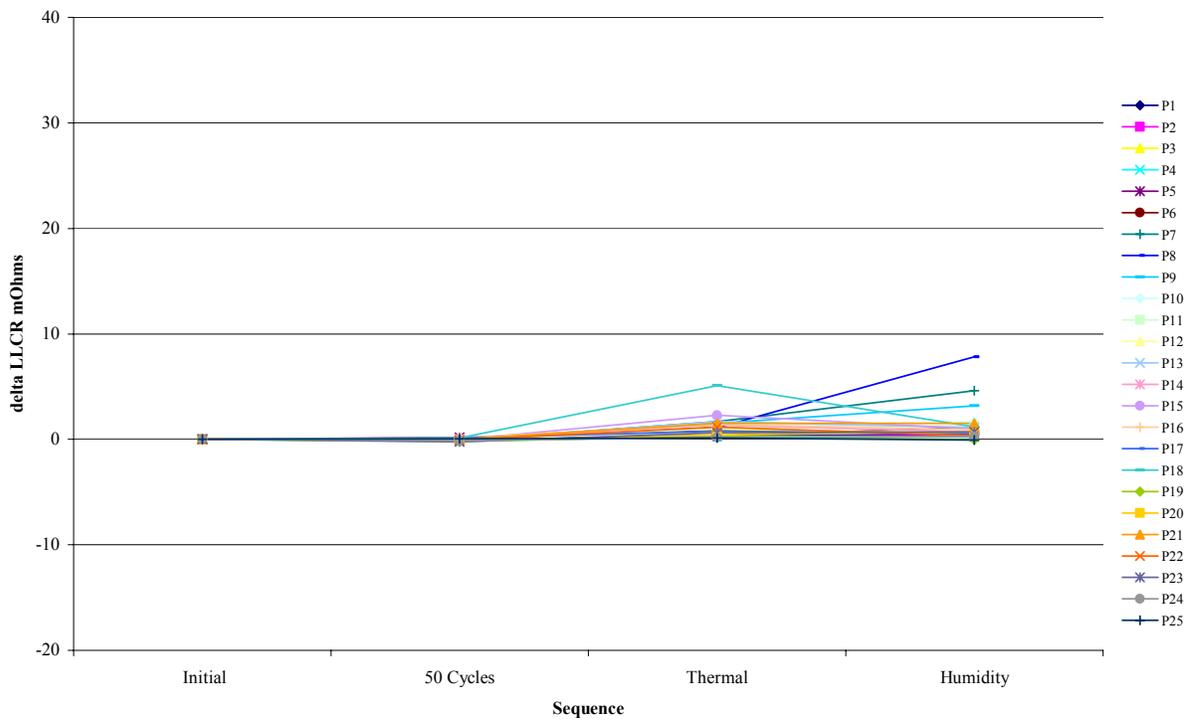


DATA SUMMARIES Continued

Board #7



Board #8

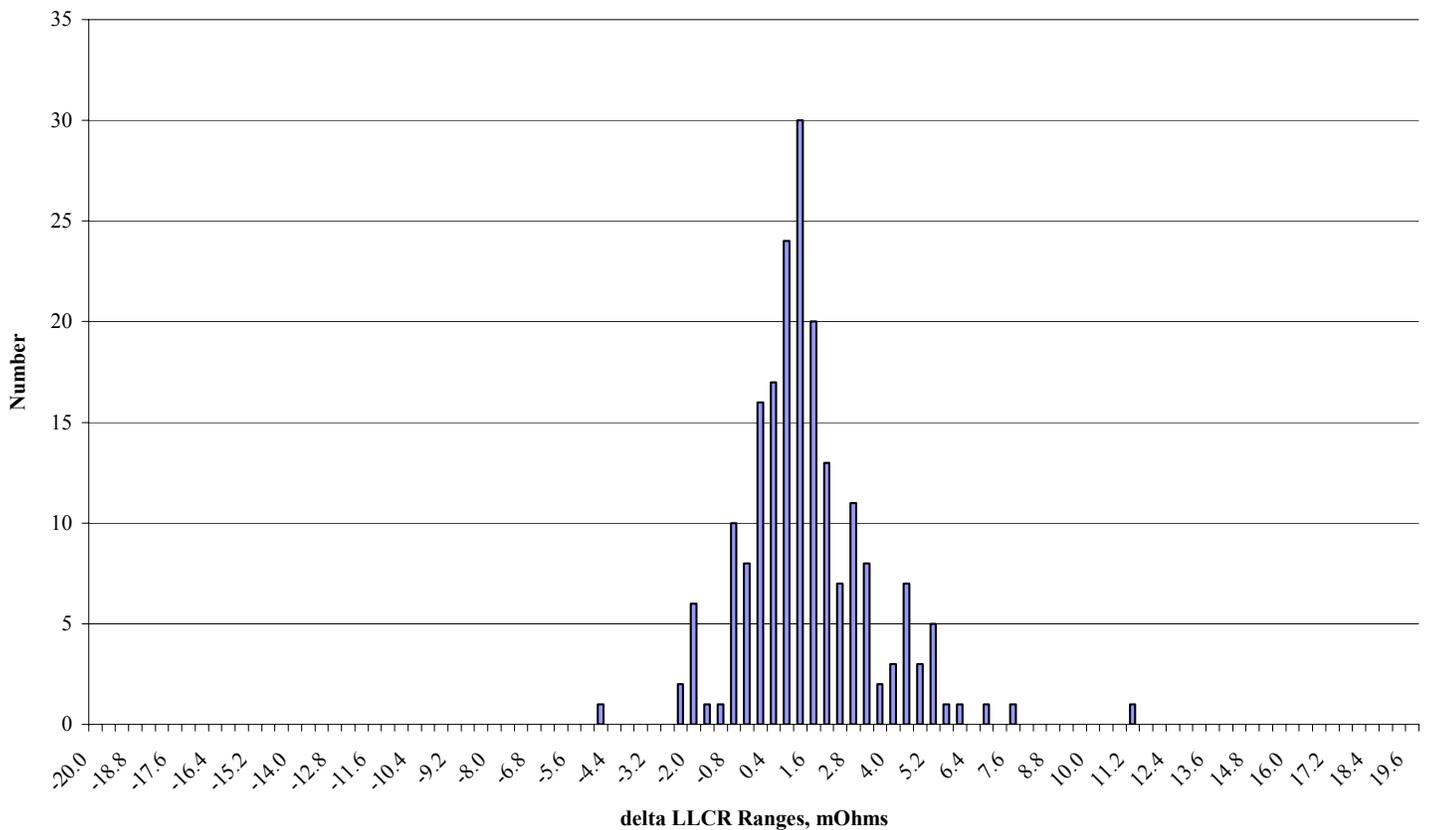


DATA SUMMARIES Continued**GAS TIGHT:**

- 1) A total of 200 points were measured.
- 2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. $\leq +5.0$ mOhms: ----- Stable
 - b. $+5.1$ to $+10.0$ mOhms:----- Minor
 - c. $+10.1$ to $+15.0$ mOhms: ----- Acceptable
 - d. $+15.1$ to $+50.0$ mOhms: ----- Marginal
 - e. $+50.1$ to $+2000$ mOhms: ----- Unstable
 - f. $>+2000$ mOhms:----- Open Failure

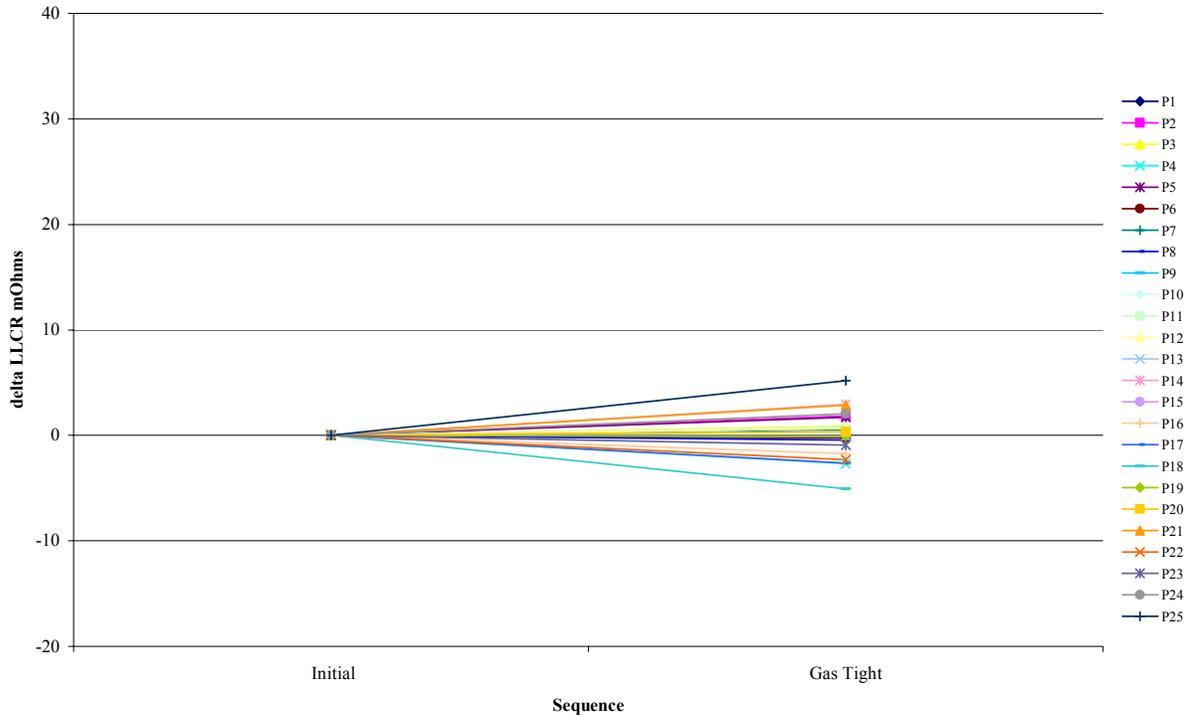
mOhm values	Actual Initial	Delta Gas Tight
Average	11.2	1.2
St. Dev.	1.0	1.9
Min	9.7	-5.1
Max	17.0	11.0
Count	200	200

**TC0427--0466, FLE/FTSH
Gas Tight**

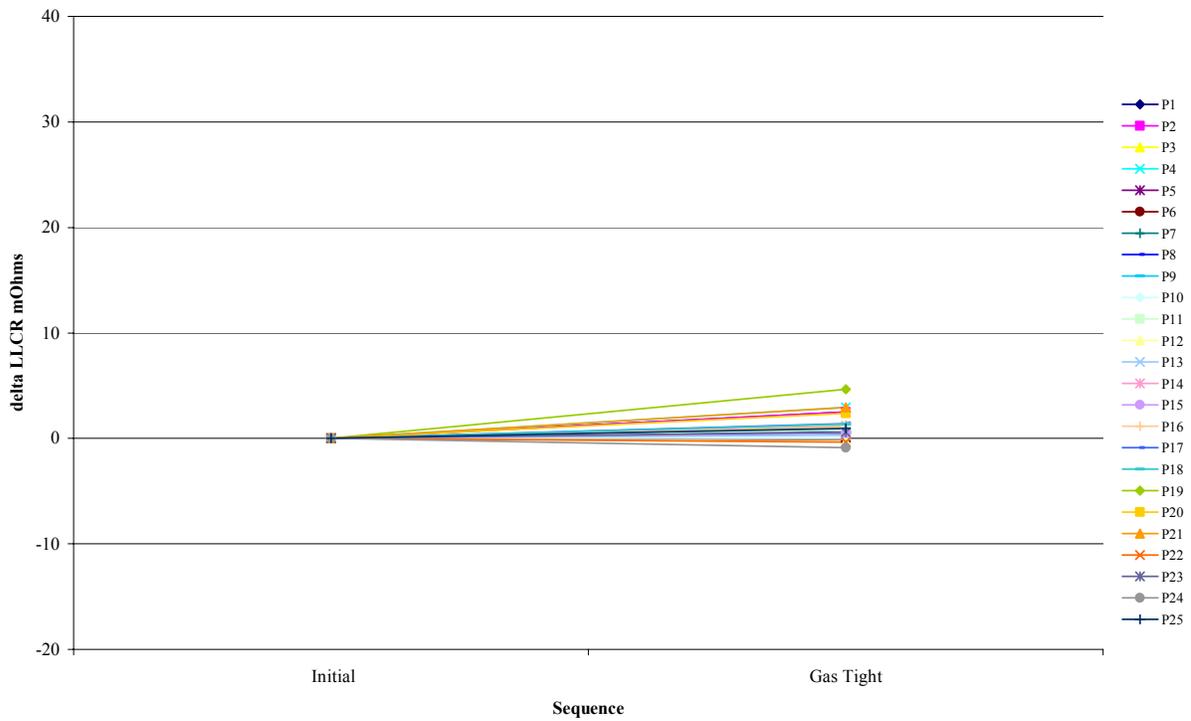


DATA SUMMARIES Continued

Board #1

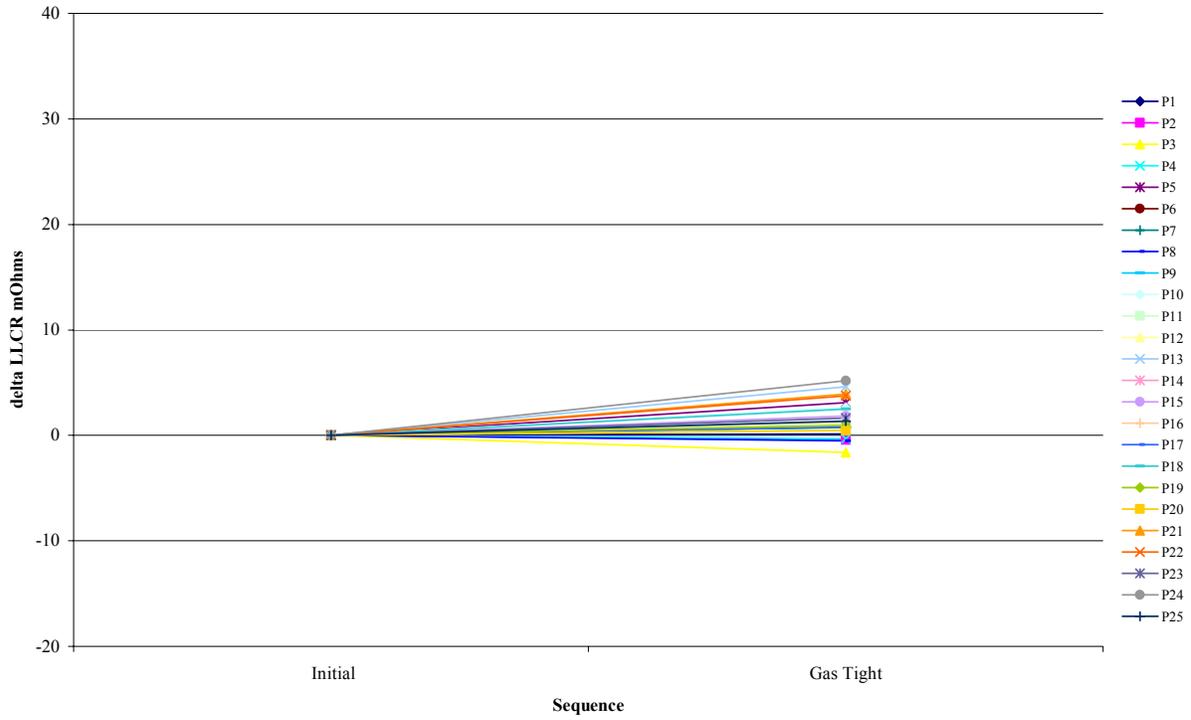


Board #2

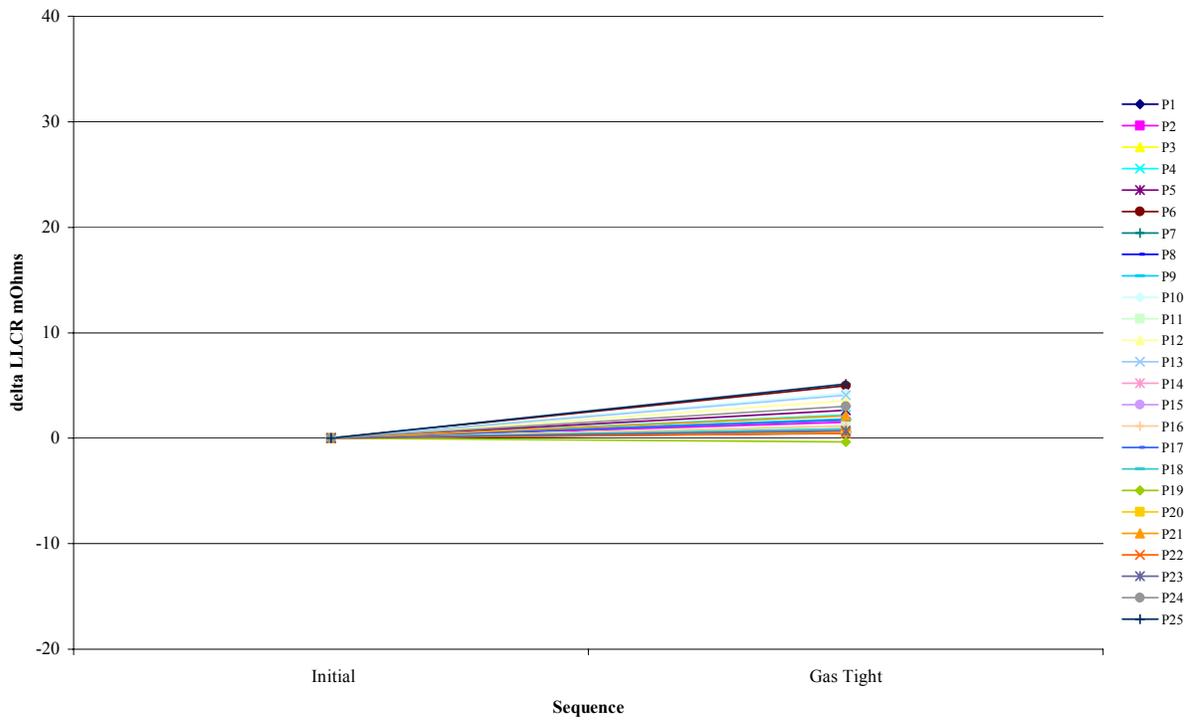


DATA SUMMARIES Continued

Board #3

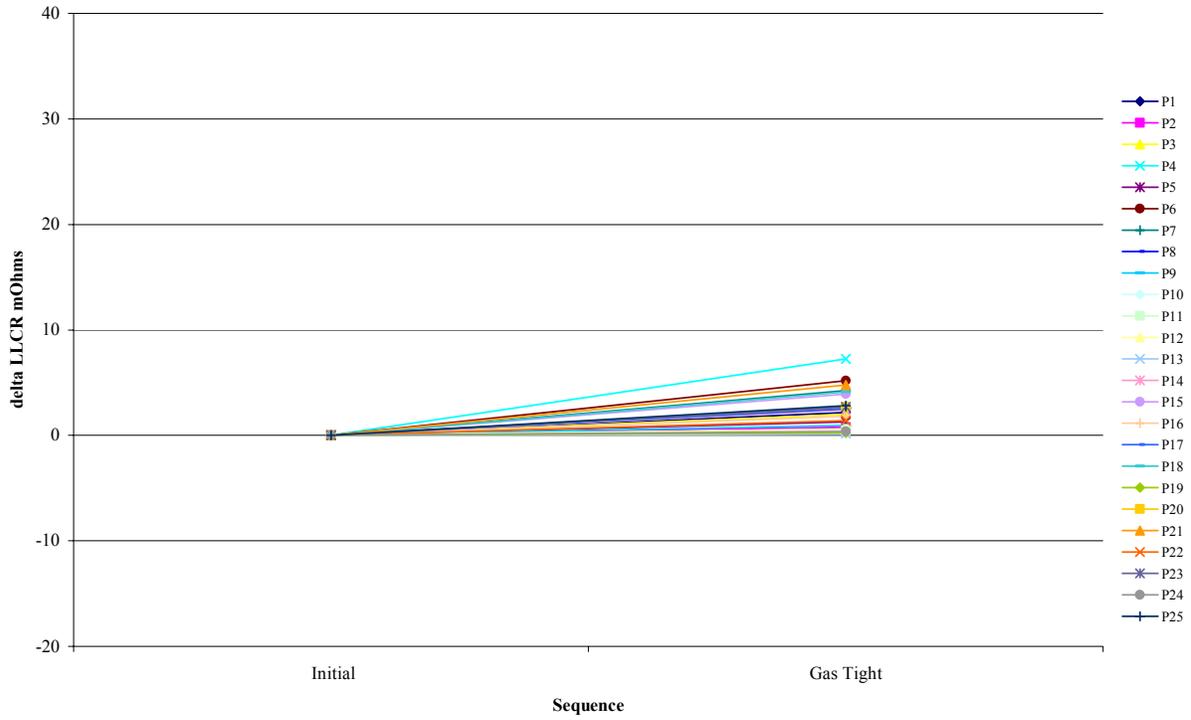


Board #4

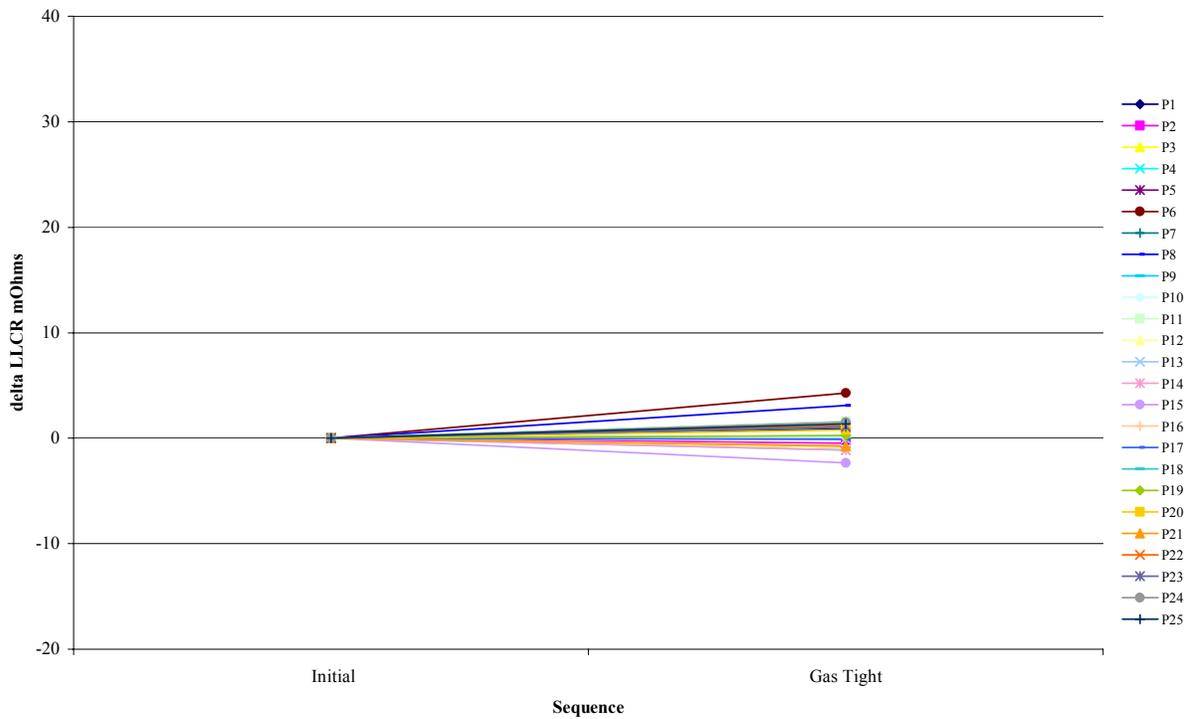


DATA SUMMARIES Continued

Board #5

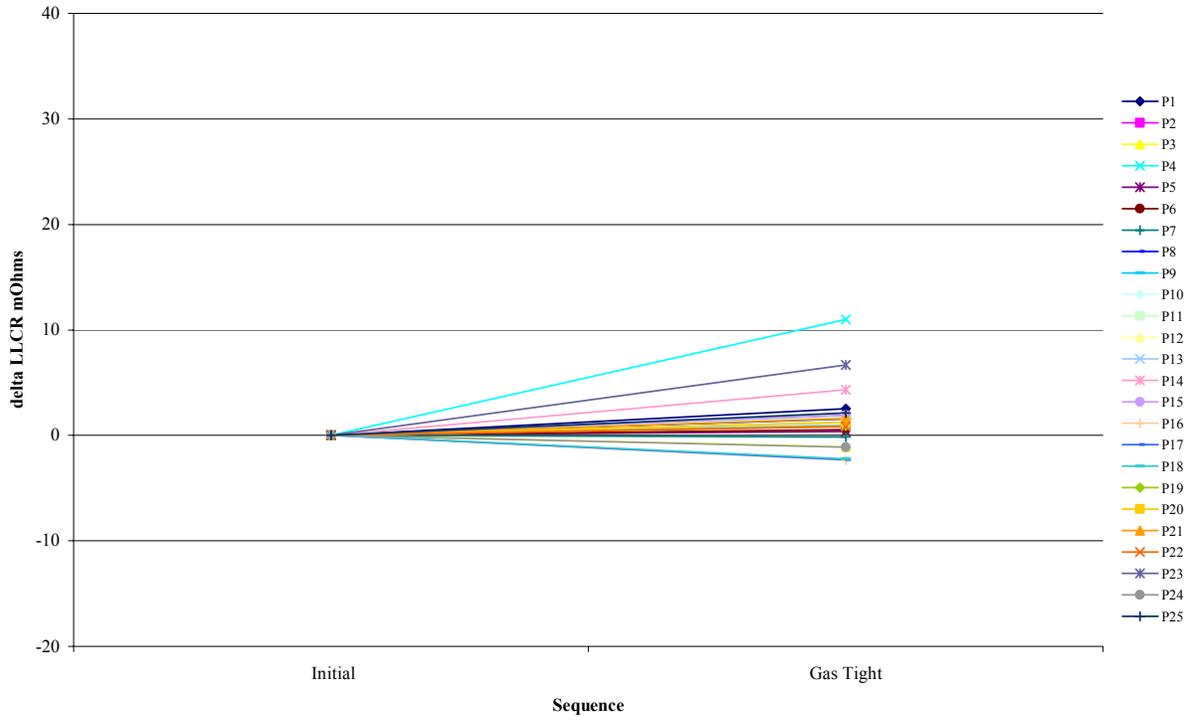


Board #6

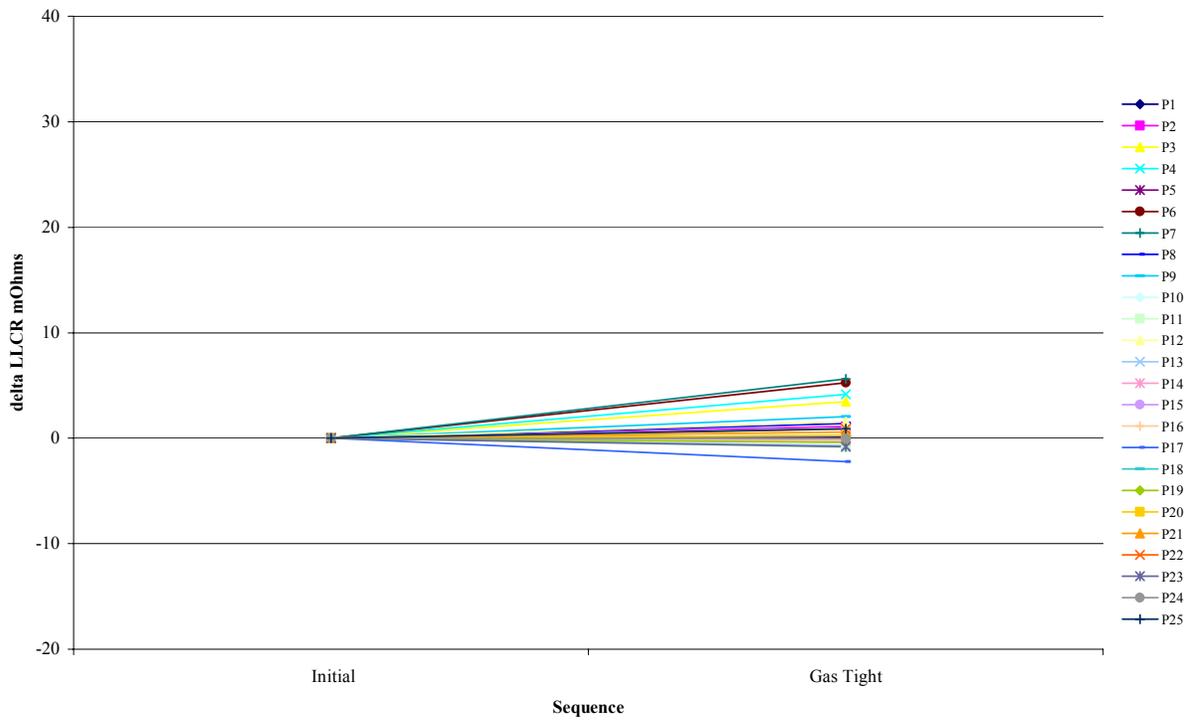


DATA SUMMARIES Continued

Board #7



Board #8



DATA**CONTACT GAPS:**

Test Date:	1/7/2005
Operator:	Troy Cook
Temperature (C):	25
Humidity (RH):	31%
Equipment ID:	OGP-01

Test Date:	1/17/2005
Operator:	Troy Cook
Temperature (C):	25
Humidity (RH):	23%
Equipment ID:	OGP-01

Measurements in inches

Initial			Mating		
Sample#	B1	B2	Sample#	B1	B2
1	0.0099	0.0094	1	0.0128	0.0115
2	0.0084	0.0089	2	0.0123	0.0110
3	0.0104	0.0101	3	0.0129	0.0133
4	0.0091	0.0083	4	0.0104	0.0128
5	0.0100	0.0103	5	0.0114	0.0130
6	0.0086	0.0091	6	0.0121	0.0130
7	0.0099	0.0092	7	0.0128	0.0095
8	0.0089	0.0089	8	0.0124	0.0118
9	0.0100	0.0103	9	0.0117	0.0132
10	0.0086	0.0091	10	0.0110	0.0122
11	0.0104	0.0104	11	0.0113	0.0130
12	0.0087	0.0087	12	0.0123	0.0119
13	0.0102	0.0103	13	0.0109	0.0125
14	0.0086	0.0086	14	0.0123	0.0125
15	0.0101	0.0102	15	0.0128	0.0126
16	0.0086	0.0087	16	0.0110	0.0117
17	0.0100	0.0102	17	0.0115	0.0121
18	0.0087	0.0091	18	0.0101	0.0094
19	0.0099	0.0100	19	0.0132	0.0125
20	0.0087	0.0084	20	0.0113	0.0119
21	0.0097	0.0100	21	0.0109	0.0095
22	0.0085	0.0086	22	0.0127	0.0118
23	0.0098	0.0100	23	0.0107	0.0127
24	0.0088	0.0086	24	0.0112	0.0091
25	0.0099	0.0103	25	0.0132	0.0131
26	0.0083	0.0088	26	0.0112	0.0159
27	0.0100	0.0097	27	0.0114	0.0134
28	0.0088	0.0087	28	0.0114	0.0126
29	0.0097	0.0095	29	0.0122	0.0111
30	0.0080	0.0081	30	0.0114	0.0126
31			31	0.0152	0.0123
32			32	0.0156	0.0122
33			33	0.0097	0.0128
34			34	0.0080	0.0124
35			35	0.0090	0.0130
36			36	0.0079	0.0126
37			37	0.0133	0.0125
38			38	0.0107	0.0124
39			39	0.0127	0.0135
40			40	0.0105	0.0123
41			41	0.0111	0.0146
42			42	0.0096	0.0130
43			43	0.0118	0.0134
44			44	0.0127	0.0127
45			45	0.0124	0.0137

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

46				46	0.0142		0.0130
47				47	0.0113		0.0136
48				48	0.0107		0.0139
49				49	0.0084		0.0132
50				50	0.0120		0.0129
51				51	0.0123		0.0130
52				52	0.0123		0.0128
53				53	0.0124		0.0133
54				54	0.0130		0.0128
55				55	0.0130		0.0128
56				56	0.0127		0.0122
57				57	0.0125		0.0126
58				58	0.0134		0.0124
59				59	0.0131		0.0126
60				60	0.0126		0.0114

DATA Continued**CONTACT GAPS:**

Test Date:	3/2/2005	Test Date:	3/28/2005
Operator:	Troy Cook	Operator:	Troy Cook
Temperature (C):	24	Temperature (C):	24
Humidity (RH):	28%	Humidity (RH):	34%
Equipment ID:	OGP-01	Equipment ID:	OGP-01

Measurements in inches

Thermal			Humidity		
Sample#	B1	B2	Sample#	B1	B2
1	0.0143	0.0143	1	0.0138	0.0144
2	0.0146	0.0139	2	0.0154	0.0157
3	0.0144	0.0114	3	0.0143	0.0157
4	0.0135	0.0135	4	0.0157	0.0142
5	0.0139	0.0140	5	0.0146	0.0155
6	0.0136	0.0145	6	0.0144	0.0140
7	0.0143	0.0138	7	0.0147	0.0147
8	0.0143	0.0137	8	0.0143	0.0141
9	0.0136	0.0145	9	0.0190	0.0141
10	0.0143	0.0146	10	0.0146	0.0133
11	0.0138	0.0145	11	0.0147	0.0124
12	0.0133	0.0145	12	0.0159	0.0154
13	0.0136	0.0138	13	0.0142	0.0154
14	0.0135	0.0146	14	0.0147	0.0152
15	0.0136	0.0151	15	0.0146	0.0148
16	0.0135	0.0131	16	0.0139	0.0146
17	0.0143	0.0146	17	0.0143	0.0144
18	0.0118	0.0132	18	0.0149	0.0149
19	0.0141	0.0135	19	0.0147	0.0143
20	0.0130	0.0135	20	0.0149	0.0146
21	0.0143	0.0140	21	0.0139	0.0146
22	0.0143	0.0139	22	0.0150	0.0145
23	0.0145	0.0142	23	0.0139	0.0143
24	0.0143	0.0139	24	0.0146	0.0143
25	0.0150	0.0143	25	0.0157	0.0145
26	0.0134	0.0142	26	0.0160	0.0143
27	0.0156	0.0145	27	0.0143	0.0139
28	0.0149	0.0138	28	0.0139	0.0160
29	0.0113	0.0145	29		0.0136
30	0.0146	0.0145	30		0.0154
31	0.0142	0.0144	31		0.0143
32	0.0137	0.0146	32		0.0154
33	0.0146	0.0122	33		0.0144
34	0.0139	0.0125	34		0.0157
35	0.0154		35		0.0123
36	0.0139		36		0.0117
37	0.0139		37		
38	0.0138		38		
39	0.0136		39		
40	0.0137		40		
41	0.0144		41		
42	0.0130		42		
43	0.0142		43		
44	0.0134		44		
45	0.0135		45		

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

DATA Continued**MATING/UNMATING:**

Test Date:	1/11/2005
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	41%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)
Part #	FLE/FTSH

Sample#	Initial				After 50 Cycles			
	Mating		Unmating		Mating		Unmating	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
1	138.4	8.7	89.8	5.6	138.9	8.7	96.8	6.1
2	122.6	7.7	66.7	4.2	138.6	8.7	80.5	5.0
3	113.1	7.1	55.2	3.5	116.5	7.3	74.9	4.7
4	120.2	7.5	65.0	4.1	135.2	8.5	81.0	5.1
5	117.4	7.3	66.9	4.2	120.6	7.5	81.9	5.1
6	121.8	7.6	83.7	5.2	129.6	8.1	82.2	5.1
7	109.4	6.8	57.0	3.6	121.4	7.6	76.6	4.8
8	115.4	7.2	63.0	3.9	123.5	7.7	63.2	4.0
9	103.5	6.5	57.0	3.6	112.5	7.0	63.5	4.0
10	115.4	7.2	61.0	3.8	128.6	8.0	74.6	4.7

Test Date:	3/2/2005
Operator:	Troy Cook
Temperature (C):	24
Humidity (RH):	25%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)

Test Date:	3/28/2005
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	35%
Equipment ID:	TCT-03
Load Cell ID:	LC-2500N(icell)

Sample#	After Thermal				After Humidity			
	Mating		Unmating		Mating		Unmating	
	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)	Force (Oz)	Force (Lbs)
1	70.6	4.4	57.4	3.6	73.8	4.6	66.7	4.2
2	85.8	5.4	77.4	4.8	74.4	4.7	69.9	4.4
3	53.8	3.4	37.0	2.3	46.9	2.9	41.3	2.6
4	48.5	3.0	36.3	2.3	61.1	3.8	73.4	4.6
5	50.7	3.2	39.8	2.5	60.5	3.8	51.0	3.2
6	78.9	4.9	38.9	2.4	78.2	4.9	65.8	4.1
7	85.8	5.4	41.8	2.6	68.0	4.3	54.9	3.4
8	73.6	4.6	34.9	2.2	62.2	3.9	49.4	3.1
9	105.8	6.6	56.0	3.5	83.8	5.2	73.4	4.6
10	126.7	7.9	77.0	4.8	63.0	3.9	42.2	2.6

DATA Continued**NORMAL FORCE:**

Test Date:	8/31/2004
Operator:	Troy Cook
Temperature:	23
Humidity:	38%
Equipment ID:	TCT-03
Load Cell ID:	LC- 5N(icell)

Initial	Deflections in inches Forces in Grams					
<u>Sample #</u>	<u>0.001</u>	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>	<u>SET</u>
1	5.02	12.85	19.22	25.28	30.72	0.00052
2	5.54	13.06	19.75	25.70	31.55	0.00048
3	6.81	14.75	20.64	26.88	32.33	0.00047
4	5.43	12.96	19.43	25.91	31.76	0.00077
5						

Test Date:	9/1/2004
Operator:	Troy Cook
Temperature:	23
Humidity:	40%
Equipment ID:	TCT-03
Load Cell ID:	LC- 5N(icell)

Thermal	Deflections in inches Forces in Grams				
<u>Sample #</u>	<u>0.001</u>	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>
1	4.60	10.87	16.47	21.31	26.08
2	4.30	11.19	16.57	21.94	26.60
3	5.55	12.72	18.00	22.48	27.22
4	5.18	11.94	17.49	22.39	27.30
5	4.57	11.19	16.75	21.67	26.60

DATA Continued

INSULATION RESISTANCE (IR):

Test Date:	7/30/2004	8/10/2004	8/27/2004
Operator:	Troy Cook	Troy Cook	Troy Cook
Temperature (C):	22	24	24
Humidity (RH):	52%	52%	45%
Equipment ID:	HPM-01	HPM-01	HPM-01

Electrification Time <i>Two (2) minutes</i>						
Sample #	Initial, Meg Ohms		Thermal, Meg Ohms		Humidity, Meg Ohms	
	Mated	Unmated	Mated	Unmated	Mated	Unmated
	<u>Insulation Resistance</u>					
1	10000	8000	50000	50000	15000	15000
2	25000	25000	50000	50000	25000	15000

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

Test Date:	7/30/2004
Operator:	Troy Cook
Temperature (C):	22
Humidity (RH):	52%
Equipment ID:	HPM-01

Voltage Rate 500 VAC Per Sec.
Test Voltage Until Breakdown Occurs

Sample #	Initial, VAC Mated			Initial, VAC Unmated		
	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>
1	1200	900	300	2500	1875	625

DATA Continued**DIELECTRIC WITHSTANDING VOLTAGE (DWV):**

Test Date:	8/10/2004
Operator:	Troy Cook
Temperature (C):	24
Humidity (RH):	52%
Equipment ID:	HPM-01

Voltage Rate 500 VAC Per Sec.

Test Voltage Until Breakdown Occurs

Sample #	Thermal, VAC Mated			Thermal, VAC Unmated		
	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>
1	2000	1500	500	2400	1800	600

Test Date:	8/16/2004
Operator:	Troy Cook
Temperature (C):	23
Humidity (RH):	42%
Equipment ID:	HPM-01

Voltage Rate 500 VAC Per Sec.

Test Voltage Until Breakdown Occurs

Sample #	Humidity, VAC Mated			Humidity, VAC Unmated		
	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>	<u>Breakdown Voltage</u>	<u>DWV</u>	<u>Working Voltage</u>
1	2100	1575	525	2100	1575	525

DATA Continued**LLCR:**

		Date	Dec. 14 2004	Dec. 15 2004	Dec. 28 2004	Jan. 17 2005
		Room Temp C	25	25	25	25
		RH	22%	19%	15%	15%
		Name	Troy Cook	Troy Cook	Troy Cook	Troy Cook
mOhm values		Actual	Delta	Delta	Delta	
Board	Position	Initial	50 Cycles	Thermal	Humidity	
1	P1	10.7	0.0	1.4	1.0	
1	P2	11.0	-0.1	0.7	0.1	
1	P3	10.6	0.1	0.5	0.2	
1	P4	11.2	-0.2	0.4	0.0	
1	P5	10.9	0.1	0.9	0.3	
1	P6	10.6	-0.1	0.6	0.4	
1	P7	10.7	-0.1	3.8	1.0	
1	P8	11.1	0.1	4.8	4.5	
1	P9	11.0	0.0	3.0	2.5	
1	P10	10.6	0.1	1.6	1.5	
1	P11	11.2	-0.4	3.6	1.9	
1	P12	10.6	0.0	1.4	1.2	
1	P13	10.7	0.0	3.4	2.0	
1	P14	10.5	-0.1	1.8	1.2	
1	P15	11.1	-0.4	4.1	0.8	
1	P16	10.8	-0.3	2.1	1.1	
1	P17	11.1	-0.3	2.5	0.9	
1	P18	10.7	-0.2	2.8	1.1	
1	P19	11.1	-0.4	4.9	0.6	
1	P20	10.3	-0.1	1.9	2.1	
1	P21	10.4	0.2	3.5	1.3	
1	P22	10.6	-0.1	0.5	0.3	
1	P23	11.0	-0.3	3.1	1.2	
1	P24	10.6	0.0	0.6	0.1	
1	P25	10.9	-0.1	0.6	0.2	
2	P1	10.1	0.0	1.7	7.7	
2	P2	10.1	0.1	1.4	2.4	
2	P3	10.2	0.0	1.3	3.0	
2	P4	10.6	-0.2	1.3	2.5	
2	P5	10.3	0.1	1.7	1.7	
2	P6	11.1	-0.1	1.2	2.3	
2	P7	10.4	-0.2	0.8	1.3	
2	P8	10.9	-0.5	0.0	1.8	
2	P9	10.2	0.0	0.9	3.0	
2	P10	10.4	-0.1	1.0	2.1	
2	P11	10.3	-0.1	0.6	2.0	
2	P12	10.4	-0.3	0.3	0.7	
2	P13	10.6	-0.4	0.1	0.4	

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

2	P14	10.6	-0.1	0.6	0.9
2	P15	10.6	0.0	0.8	1.2
2	P16	10.8	-0.4	0.8	2.2
2	P17	10.4	-0.2	0.9	1.0
2	P18	10.6	0.1	1.2	1.0
2	P19	10.6	-0.1	0.4	0.5
2	P20	13.8	-2.7	-2.1	-2.5
2	P21	10.4	-0.1	4.4	4.4
2	P22	10.1	0.1	4.4	5.2
2	P23	10.9	-0.5	2.8	2.0
2	P24	10.5	-0.1	0.7	0.1
2	P25	10.0	0.2	2.3	2.0
3	P1	12.6	-0.6	-0.9	0.0
3	P2	11.2	-0.2	0.1	1.2
3	P3	11.4	-0.3	-0.1	0.1
3	P4	11.0	-0.1	0.4	0.4
3	P5	11.2	0.0	0.9	1.1
3	P6	11.0	-0.1	1.0	0.6
3	P7	11.1	0.5	2.1	1.2
3	P8	10.9	0.1	2.6	1.2
3	P9	11.2	0.0	3.1	0.8
3	P10	10.9	-0.1	2.2	1.4
3	P11	11.2	-0.2	2.3	0.7
3	P12	10.7	0.2	2.2	2.0
3	P13	11.0	0.0	1.4	1.4
3	P14	10.9	0.0	0.4	0.7
3	P15	10.7	0.1	0.7	2.5
3	P16	10.8	0.1	0.4	0.8
3	P17	10.6	0.3	0.7	1.1
3	P18	10.8	0.2	0.5	1.0
3	P19	10.6	-0.1	0.5	0.9
3	P20	10.7	-0.1	0.1	0.7
3	P21	11.0	0.1	0.7	1.2
3	P22	11.1	-0.1	0.5	1.6
3	P23	11.0	0.0	0.7	2.1
3	P24	11.6	-0.3	0.0	0.0
3	P25	10.9	0.0	0.5	1.3
4	P1	11.0	-0.3	1.0	0.4
4	P2	11.0	0.1	1.0	0.3
4	P3	10.9	0.0	1.6	1.2
4	P4	11.1	-0.3	0.4	0.1
4	P5	10.7	0.0	0.7	0.5
4	P6	10.4	-0.1	1.0	2.7
4	P7	10.5	0.0	0.2	0.3
4	P8	10.8	0.0	4.6	4.6
4	P9	11.0	-0.1	0.3	0.9
4	P10	10.4	0.2	2.8	2.5
4	P11	10.5	-0.1	0.2	1.1
4	P12	10.6	-0.2	1.8	3.1
4	P13	10.5	0.1	1.4	2.9

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

4	P14	11.1	-0.2	0.6	0.2
4	P15	10.5	0.1	1.2	1.5
4	P16	11.0	-0.1	1.9	1.4
4	P17	10.5	0.0	1.3	2.8
4	P18	10.6	0.0	2.5	2.7
4	P19	10.6	0.0	4.3	4.1
4	P20	10.2	0.0	1.3	2.0
4	P21	10.8	0.0	0.8	1.1
4	P22	10.7	-0.2	0.8	0.5
4	P23	10.5	0.2	0.9	0.7
4	P24	10.5	-0.1	0.7	1.2
4	P25	10.8	0.1	1.8	1.8
5	P1	10.8	-0.2	0.9	0.6
5	P2	10.9	-0.3	0.3	1.0
5	P3	10.5	-0.3	1.0	0.6
5	P4	11.0	-0.3	1.4	1.2
5	P5	11.1	-0.2	1.0	1.2
5	P6	10.8	-0.2	0.4	0.3
5	P7	10.8	-0.1	0.3	-0.1
5	P8	10.7	-0.2	2.0	0.5
5	P9	10.9	-0.2	0.2	0.0
5	P10	11.0	-0.2	0.3	0.0
5	P11	10.7	-0.2	0.2	0.4
5	P12	11.0	-0.3	0.4	0.5
5	P13	10.6	-0.1	0.6	0.5
5	P14	10.8	0.0	0.7	0.4
5	P15	11.0	-0.2	0.7	0.5
5	P16	10.9	0.5	1.0	0.7
5	P17	10.8	-0.2	0.5	0.4
5	P18	10.8	-0.1	0.4	0.0
5	P19	10.8	-0.2	0.7	0.3
5	P20	10.3	-0.2	1.4	0.7
5	P21	10.7	-0.3	2.1	2.6
5	P22	10.2	0.3	1.5	1.9
5	P23	10.4	-0.2	0.9	1.0
5	P24	10.4	0.3	1.9	2.8
5	P25	10.4	-0.1	0.5	1.2
6	P1	10.4	0.3	2.8	4.1
6	P2	10.6	0.1	3.4	2.3
6	P3	10.6	0.1	3.1	3.0
6	P4	10.6	-0.1	2.6	1.8
6	P5	11.0	0.1	2.8	4.8
6	P6	10.8	0.6	3.6	1.7
6	P7	11.0	1.0	4.5	4.4
6	P8	10.7	0.3	6.2	1.2
6	P9	10.6	0.1	3.2	2.7
6	P10	10.7	0.4	3.5	2.3
6	P11	10.8	0.1	2.0	2.4
6	P12	11.9	-0.8	1.9	0.4
6	P13	10.5	0.1	0.8	0.8

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

6	P14	10.8	-0.2	0.4	0.7
6	P15	10.6	0.1	0.7	1.1
6	P16	10.6	0.2	1.2	0.8
6	P17	11.5	0.6	0.2	-0.2
6	P18	10.7	0.4	1.0	0.5
6	P19	10.6	0.0	0.6	0.4
6	P20	10.3	0.4	2.4	1.6
6	P21	10.8	0.0	6.6	0.7
6	P22	10.6	0.1	4.4	2.8
6	P23	10.5	1.6	3.8	2.0
6	P24	10.9	0.0	1.6	2.4
6	P25	10.2	0.4	4.7	1.8
7	P1	10.4	0.1	0.5	0.9
7	P2	10.5	0.0	1.9	2.5
7	P3	10.4	0.0	0.5	2.1
7	P4	10.4	-0.1	0.8	1.8
7	P5	10.5	0.0	1.3	1.3
7	P6	10.7	0.0	0.6	3.1
7	P7	10.7	-0.1	2.0	2.4
7	P8	11.2	-0.1	2.1	3.7
7	P9	10.7	-0.2	1.1	3.4
7	P10	10.9	-0.1	1.3	1.5
7	P11	10.5	-0.2	1.1	0.7
7	P12	11.1	-0.1	1.8	0.9
7	P13	10.7	0.0	1.0	1.2
7	P14	10.6	-0.1	2.7	2.4
7	P15	10.8	0.0	2.7	3.7
7	P16	10.7	0.0	5.3	2.3
7	P17	10.7	-0.2	2.1	2.2
7	P18	10.7	-0.1	1.9	1.8
7	P19	10.9	-0.2	7.0	2.1
7	P20	10.1	0.1	2.1	1.3
7	P21	10.4	0.2	1.5	3.8
7	P22	10.1	0.1	1.1	2.7
7	P23	10.0	0.1	1.2	3.8
7	P24	10.6	0.1	0.4	1.3
7	P25	10.3	-0.1	0.9	2.0
8	P1	10.5	0.0	0.4	0.5
8	P2	10.6	0.0	0.3	0.4
8	P3	11.0	0.1	0.9	0.6
8	P4	10.8	-0.2	0.3	0.2
8	P5	10.8	0.2	0.8	0.5
8	P6	10.9	-0.1	0.3	1.1
8	P7	10.7	-0.1	1.7	4.6
8	P8	10.6	-0.1	1.1	7.8
8	P9	10.8	0.1	1.5	3.2
8	P10	10.8	-0.2	1.1	1.7
8	P11	10.8	0.0	1.0	1.3
8	P12	10.4	0.1	0.7	0.7
8	P13	10.8	-0.1	1.7	1.1

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

8	P14	10.5	0.1	1.4	0.7
8	P15	10.7	0.0	2.3	1.0
8	P16	10.7	0.1	1.4	0.9
8	P17	10.6	0.1	0.8	0.6
8	P18	10.6	0.1	5.1	1.2
8	P19	11.0	-0.2	0.3	0.0
8	P20	10.9	-0.1	0.4	0.7
8	P21	11.1	0.0	1.5	1.5
8	P22	10.9	0.0	1.1	0.3
8	P23	11.1	-0.2	0.6	0.7
8	P24	10.9	-0.1	0.2	0.2
8	P25	10.8	0.0	0.2	0.0

DATA Continued**GAS TIGHT:**

		Date	Aug. 02 2004	Sep. 01 2004
		Room Temp C	24	23
		RH	39%	43%
		Name	Troy Cook	Troy Cook
mOhm values		Actual	Delta	
Board	Position	Initial	Gas Tight	
1	P1	10.9	-0.1	
1	P2	10.3	1.8	
1	P3	11.8	0.9	
1	P4	14.3	-2.7	
1	P5	11.1	1.7	
1	P6	10.8	-0.2	
1	P7	10.7	0.5	
1	P8	11.7	-0.4	
1	P9	10.8	0.6	
1	P10	10.4	0.8	
1	P11	10.3	0.7	
1	P12	10.2	0.7	
1	P13	10.6	-0.1	
1	P14	10.6	2.9	
1	P15	10.9	0.3	
1	P16	14.0	-1.7	
1	P17	14.2	-2.6	
1	P18	17.0	-5.1	
1	P19	12.2	-0.1	
1	P20	11.0	0.3	
1	P21	12.1	2.9	
1	P22	14.6	-2.3	
1	P23	12.3	-0.9	
1	P24	11.4	2.0	
1	P25	10.3	5.2	
2	P1	10.1	2.5	
2	P2	10.2	2.5	
2	P3	10.7	1.1	
2	P4	10.6	2.9	
2	P5	10.6	0.8	
2	P6	11.7	-0.2	
2	P7	11.1	0.5	
2	P8	11.6	0.6	
2	P9	10.6	0.8	
2	P10	12.4	0.1	
2	P11	10.5	0.8	
2	P12	11.1	-0.3	

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

2	P13	11.1	0.3
2	P14	12.1	1.2
2	P15	11.7	0.5
2	P16	10.7	1.3
2	P17	11.1	1.4
2	P18	11.9	1.4
2	P19	11.3	4.6
2	P20	10.9	2.4
2	P21	10.7	2.9
2	P22	11.5	-0.3
2	P23	10.5	0.6
2	P24	11.4	-0.9
2	P25	10.0	0.9
3	P1	11.9	0.2
3	P2	12.0	-0.5
3	P3	12.5	-1.6
3	P4	11.3	-0.3
3	P5	11.5	3.1
3	P6	12.4	0.8
3	P7	11.0	0.8
3	P8	12.0	-0.5
3	P9	11.2	0.7
3	P10	10.4	2.7
3	P11	10.2	1.2
3	P12	11.1	0.5
3	P13	10.2	4.6
3	P14	10.7	0.9
3	P15	10.4	1.8
3	P16	10.4	1.3
3	P17	10.7	0.8
3	P18	12.1	2.5
3	P19	11.5	0.9
3	P20	10.1	0.5
3	P21	11.5	3.9
3	P22	10.5	3.8
3	P23	10.7	1.7
3	P24	10.9	5.2
3	P25	10.5	1.4
4	P1	10.1	0.5
4	P2	10.2	1.5
4	P3	10.7	1.1
4	P4	10.8	2.2
4	P5	10.4	2.7
4	P6	11.0	5.0
4	P7	10.5	1.8
4	P8	10.9	0.6
4	P9	10.9	1.8
4	P10	10.7	4.3
4	P11	10.6	1.1
4	P12	10.5	3.6

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

4	P13	10.8	4.1
4	P14	10.3	0.6
4	P15	10.5	0.8
4	P16	10.3	1.1
4	P17	11.4	1.7
4	P18	11.4	0.9
4	P19	11.8	-0.4
4	P20	10.8	0.6
4	P21	11.0	2.1
4	P22	11.6	0.5
4	P23	11.0	0.7
4	P24	11.1	3.0
4	P25	10.4	5.2
5	P1	10.0	2.2
5	P2	10.7	0.8
5	P3	10.7	2.0
5	P4	10.7	7.2
5	P5	10.7	1.3
5	P6	10.6	5.2
5	P7	10.6	4.2
5	P8	10.5	2.6
5	P9	11.0	0.9
5	P10	10.9	0.1
5	P11	10.4	0.6
5	P12	10.6	0.5
5	P13	10.9	0.2
5	P14	10.7	2.4
5	P15	10.5	3.9
5	P16	10.9	1.8
5	P17	10.6	2.5
5	P18	10.8	4.1
5	P19	10.8	0.3
5	P20	10.4	2.7
5	P21	12.1	4.8
5	P22	10.8	1.4
5	P23	10.9	2.7
5	P24	10.1	0.4
5	P25	11.2	2.8
6	P1	11.3	0.9
6	P2	12.6	-0.5
6	P3	12.5	1.2
6	P4	11.7	-1.1
6	P5	12.1	-0.9
6	P6	10.6	4.3
6	P7	11.2	1.6
6	P8	11.4	3.1
6	P9	11.3	0.2
6	P10	11.8	0.1
6	P11	11.0	1.6
6	P12	12.3	-0.9

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

6	P13	11.0	-0.1
6	P14	11.9	-1.1
6	P15	13.5	-2.3
6	P16	11.9	-0.7
6	P17	11.6	-0.1
6	P18	10.7	1.0
6	P19	11.2	0.2
6	P20	10.4	0.8
6	P21	11.7	-0.7
6	P22	11.0	1.2
6	P23	10.8	1.1
6	P24	10.9	1.5
6	P25	10.6	1.4
7	P1	10.5	2.6
7	P2	11.1	1.8
7	P3	12.6	-1.1
7	P4	11.7	11.0
7	P5	11.6	0.4
7	P6	10.8	0.5
7	P7	12.1	-0.1
7	P8	10.5	1.6
7	P9	10.4	0.9
7	P10	10.6	1.3
7	P11	10.1	1.8
7	P12	10.9	1.2
7	P13	11.3	1.0
7	P14	11.7	4.3
7	P15	11.6	1.9
7	P16	13.6	-2.3
7	P17	13.9	-2.3
7	P18	13.5	-2.2
7	P19	11.9	0.9
7	P20	10.8	1.2
7	P21	12.1	1.6
7	P22	12.3	0.8
7	P23	11.9	6.7
7	P24	12.0	-1.1
7	P25	10.8	2.1
8	P1	9.7	0.1
8	P2	10.5	1.1
8	P3	10.4	3.5
8	P4	10.9	4.2
8	P5	11.2	0.2
8	P6	11.0	5.3
8	P7	11.0	5.6
8	P8	10.7	1.4
8	P9	9.9	2.1
8	P10	11.5	0.9
8	P11	10.7	-0.9
8	P12	11.4	1.6

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

8	P13	11.9	-0.7
8	P14	10.3	-0.2
8	P15	10.3	-0.4
8	P16	10.3	-0.3
8	P17	12.6	-2.2
8	P18	10.3	0.2
8	P19	10.9	-0.4
8	P20	9.9	0.3
8	P21	12.1	0.6
8	P22	10.4	0.9
8	P23	11.4	-0.8
8	P24	10.3	0.0
8	P25	10.0	0.9

EQUIPMENT AND CALIBRATION SCHEDULES**Equipment #:** THL-02**Description:** Temperature/Humidity Chart Recorder**Manufacturer:** Dickson**Model:** THDX**Serial #:** 00120351**Accuracy:** Temp: +/- 1C; Humidity: +/-2% RH (0 - 60%) +/- 3% RH (61 - 95%).

... Last Cal: 6/02/04, Next Cal: 6/02/05

Equipment #: MO-03**Description:** Multimeter /Data Acquisition System**Manufacturer:** Keithley**Model:** 2700**Serial #:** 0791975**Accuracy:** See Manual

... Last Cal: 6/12/04, Next Cal: 6/12/05

Equipment #: MO-02**Description:** Multimeter /Data Acquisition System**Manufacturer:** Keithley**Model:** 2700**Serial #:** 0780546**Accuracy:** See Manual

... Last Cal: 6/12/04, Next Cal: 6/12/05

Equipment #: MO-04**Description:** Multimeter /Data Acquisition System**Manufacturer:** Keithley**Model:** 2700**Serial #:** 0798688**Accuracy:** See Manual

... Last Cal: 6/12/04, Next Cal: 6/12/05

Equipment #: OGP-01**Description:** 6"X 6" Video Measuring Machine**Manufacturer:** Optical Gauging Products**Model:** Smartscope 200 CFOV**Serial #:** SF2001956**Accuracy:** See Manual

... Last Cal: 3/12/04, Next Cal: 3/31/05

Equipment #: MV-3**Description:** 6"x6" Video Measuring Machine**Manufacturer:** Micro-Vu**Model:** M301**Serial #:** V6815**Accuracy:** See Manual

... Last Cal: 3/5/04, Next Cal: 3/5/05

Tracking Code: TC0447--0556

Part #: FLE-130-01-G-DV-A

Part description: Low Profile Socket Strip

Equipment #: OV-03

Description: Cascade Tek Forced Air Oven

Manufacturer: Cascade Tek

Model: TFO-5

Serial #: 0500100

Accuracy: Temp. Stability: +/- .1C/C change in ambient

... Last Cal: 6/20/04, Next Cal: 6/30/05

Equipment #: THC-01

Description: Temperature/Humidity Chamber

Manufacturer: Thermotron

Model: SM-8-7800

Serial #: 30676

Accuracy: See Manual See Manual

... Last Cal: 4/22/2004, Next Cal: 5/22/2005

Equipment #: TC090601-103/105

Description: IC Thermocouple-103/105

Manufacturer: Samtec

Serial #: TC090601-103/105

Accuracy: +/- 1 degree C

Equipment #: HPM-01

Description: Hipot Megommeter

Manufacturer: Hipotronics

Model: H306B-A

Serial #: M9905004

Accuracy: 2 % Full Scale Accuracy

... Last Cal: 6/12/04, Next Cal: 6/12/05