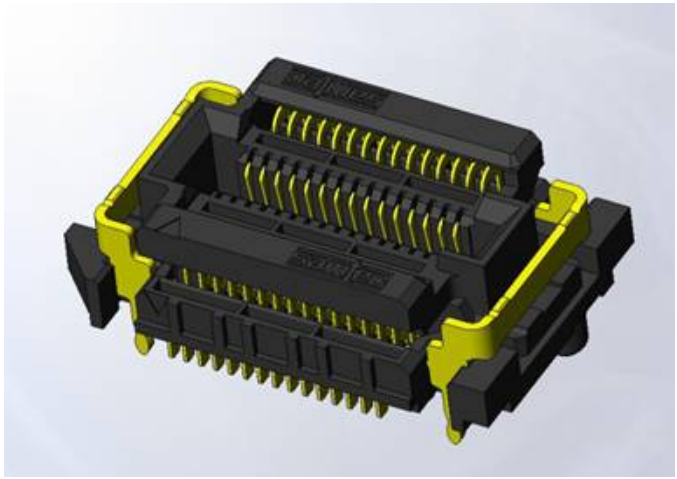
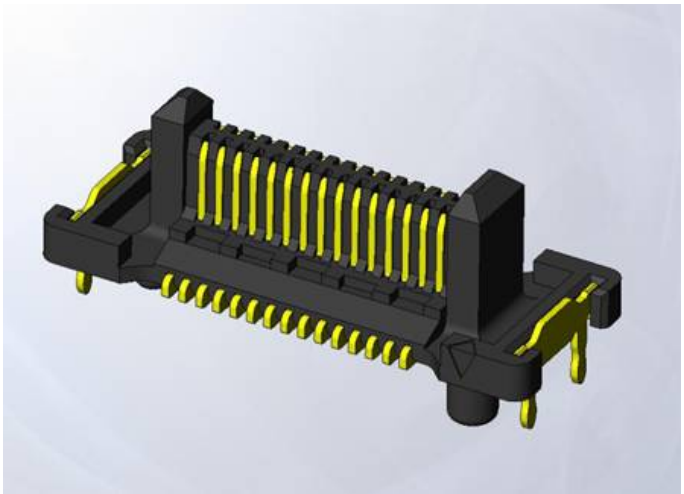
Project Number: Design Verification Test Report	Tracking Code: TC1009—3224_Report_Rev_3		
Requested by: Kevin Meredith	Date: 8/26/2010	Product Rev: 1	
Part #: FS5-30-04.0-L-DV-TH-TR/ FT5-30-03.0-L-DV-TH-TR	Lot #: N/A	Tech: Gary Lomax	Eng: Eric Mings
Part description: FS5-30-04.0-L-DV-TH-TR/ FT5-30-03.0-L-DV-TH-TR		Qty to test: 150	
Test Start: 3/10/2010	Test Completed: 5/6/2010		





Design Verification Test Report

FS5/FT5
FS5-30-04.0-L-DV-TH-TR, FT5-30-03.0-L-DV-TH-TR

CERTIFICATION

All instruments and measuring equipment were calibrated to National Institute for Standards and Technology (NIST) traceable standards according to IS0 10012-l and ANSI/NCSL 2540-1, as applicable.

SCOPE

To perform the following tests: Design Verification Test ,See test plan TC109-3224.

APPLICABLE DOCUMENTS

Standards: EIA Publication 364

TEST SAMPLES AND PREPARATION

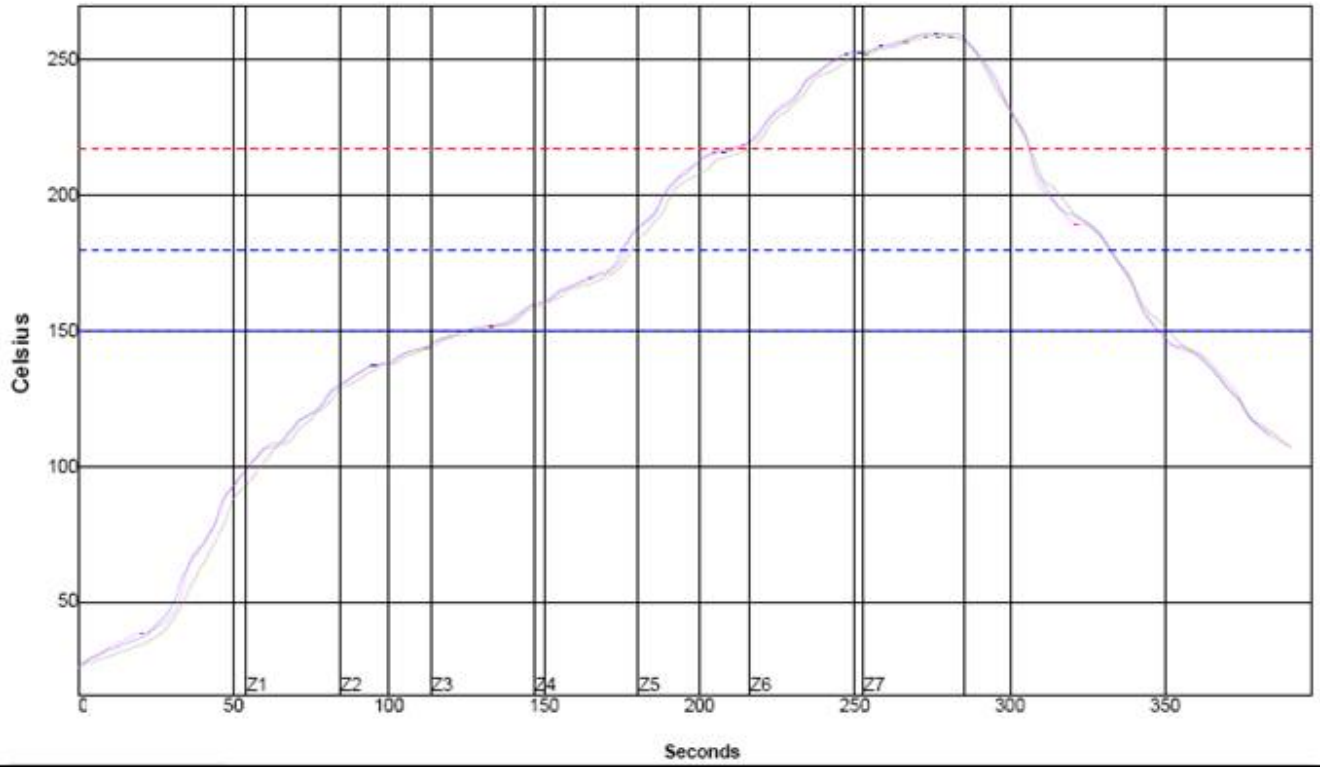
1) All materials were manufactured in accordance with the applicable product specification.
2) All test samples were identified and encoded to maintain traceability throughout the test sequences.
3) After soldering, the parts to be used for LLCR and DWV/IR testing were cleaned according to TLWI-0001.
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) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
7) Any additional preparation will be noted in the individual test sequences.
8) Solder Information: Lead free
9) Re-Flow Time/Temp: See accompanying profile.
10) Samtec Test PCBs used: PCB-102221-TST-XX/ PCB-102235-FAM-XX/ PCB-102222-TST-XX/ PCB-102218-TST-XX.

TYPICAL OVEN PROFILE (Soldering Parts to Test Boards)

Setpoints (Celsius)

Zone	1	2	3	4	5	6	7
Top	155.0	165.0	165.0	180.0	265.0	295.0	280.0
Bottom	155.0	165.0	165.0	180.0	265.0	295.0	280.0

Conveyor Speed (inch/min): 21.00



FLOWCHARTS

Gas Tight

TEST STEP	GROUP A 192 Points Assemblies fixtured Shifted 0.5mm X and Y
01	Measure X Y shift of each test set
02	LLCR-1
03	Gas Tight
04	LLCR-2

Gas Tight = EIA-364-36A

LLCR = EIA-364-23, LLCR

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

FLOWCHARTS Continued

Mating/Unmating/Gaps/Normal Force/Deflection Force

TEST STEP	GROUP A1 10 Boards (each position submitted) Static Mate	GROUP B1 Individual Contacts (8-10 min)	GROUP B2 Individual Contacts (8-10 min)
01	Contact Gaps	Setup Approved	Setup Approved
02	Mating / Unmating (smallest, largest positions)	Normal Force (in the body and soldered on PCB unless otherwise specified)	Thermal Aging (Mated)
03	25 Cycles		Normal Force (in the body and soldered on PCB unless otherwise specified)
04	Clean w/Compressed Air		
05	Mating / Unmating (smallest, largest positions)		
06	25 Cycles (50 Total)		
07	Clean w/Compressed Air		
08	Mating / Unmating (smallest, largest positions)		
09	25 Cycles (75 Total)		
10	Clean w/Compressed Air		
11	Mating / Unmating (smallest, largest positions)		
12	25 Cycles (100 Total)		
13	Clean w/Compressed Air		
14	Mating / Unmating (smallest, largest positions)		
15	Contact Gaps		
16	Thermal Aging (Mated)		
17	Mating / Unmating (smallest, middle, largest positions)		
18	Contact Gaps		
19	Cyclic Humidity (Mated)		
20	Mating / Unmating (smallest, largest positions)		

Thermal Aging = EIA-364-17, Test Condition 4 (105 °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
(Perpendicular) displacement Force = 12.7 mm/min +/- 6 mm/min
Spec is 50 N @ 1 mm displacement
Contact Gaps/Height - No standard method. Usually measured optically

FLOWCHARTS Continued

IR & DWV

TEST STEP	GROUP A1 2 Mated Sets Break Down - Pin to Pin	GROUP A3 2 Unmated of Part # Being Tested Break Down - Pin to Pin	GROUP A4 2 Unmated of Mating Part # Break Down - Pin to Pin	GROUP B1 2 Mated Sets Pin to Pin
01	Assemblies fixtured Shifted 0.5mm X and Y	Unmated	Unmated	Assemblies fixtured Shifted 0.5mm X and Y
02	DWV/Break Down Voltage	DWV/Break Down Voltage	DWV/Break Down Voltage	IR & DWV at test voltage (on both mated sets and on each connector unmated)
03				Thermal Aging (both sets unmated)
04				IR & DWV at test voltage (on both mated sets and on each connector unmated)
05				Cyclic Humidity (both sets unmated)
06				IR & DWV at test voltage (on both mated sets and on each connector unmated)

*** - DWV on group B to be performed at Test Voltage**
DWV test voltage is equal to 75% of the lowest break down voltage from group A1, A2 or A3
Thermal Aging = EIA-364-17, Test Condition 4 (105 °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 Condition 1

FLOWCHARTS Continued

Durability/Thermal Age/Cyclic Humidity

TEST STEP	GROUP A 192 Points	GROUP B 192 Points
	Static Mate	Assemblies mated static then Shifted 0.5mm X and Y 25 cycles (Shifting should be performed manually within limits of connector, see IG engineer for instructions.
	100 Cycles	
01	LLCR-1	LLCR-1
02	100 Cycles	100 Cycles
03	Clean Mating Interface	Clean Mating Interface
04	LLCR-2	LLCR-2
05	Thermal Age (Mated and undisturbed)	Thermal Age (Mated and undisturbed)
06	LLCR-3	LLCR-3
07	Cyclic Humidity (Mated and undisturbed)	Cyclic Humidity (Mated and undisturbed)
08	LLCR-4	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

Current Carrying Capacity

3 Mated Assemblies Each

TEST STEP	GROUP A 3 Mated Assembies 2 CONTACT POWERED Assemblies fixtured Shifted 0.5mm X and Y	GROUP B 3 Mated Assembies 4 CONTACTS POWERED Assemblies fixtured Shifted 0.5mm X and Y	GROUP C 3 Mated Assembies 6 CONTACTS POWERED Assemblies fixtured Shifted 0.5mm X and Y	GROUP D 3 Mated Assembies 8 CONTACTS POWERED Assemblies fixtured Shifted 0.5mm X and Y	GROUP E 3 Mated Assembies ALL CONTACTS POWERED Assemblies fixtured Shifted 0.5mm X and Y
01	CCC	CCC	CCC	CCC	CCC

(TIN PLATING) - Tabulate calculated current at RT, 65° C, 75° C and 95° C
after derating 20% and based on 105° C
(GOLD PLATING) - 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

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) All test samples are pre-conditioned at ambient.
5) All test samples are exposed to environmental stressing in the mated condition.

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) All samples are pre-conditioned at ambient.
5) All test samples are exposed to environmental stressing in the mated condition.

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. 80^{o} C
    c. 95^{o} C
    d. 115^{o} 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 above the surrounding plastic surface were measured before and after stressing the contacts (e.g. thermal aging, mechanical cycling, etc.).
2) Typically, all contacts on the connector are measured.

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 TC^2, 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 TC^2 software in order to acquire and record the test data.
10) The permanent set of each contact shall be measured within the TC^2 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 or Signal-to-Ground
        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.

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 or Signal-to-Ground
        ii. Barometric Test Condition 1
        iii. Rate of Application 500 V/Sec
        iv. 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. <= +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. <= +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 10:1.
      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 ----------1.8 A per contact with 2 adjacent contacts powered**
- **CCC for a 30°C Temperature Rise ----------1.4 A per contact with 4 adjacent contacts powered**
- **CCC for a 30°C Temperature Rise ----------1.1 A per contact with 6 adjacent contacts powered**
- **CCC for a 30°C Temperature Rise ----------1.0 A per contact with 8 adjacent contacts powered**
- **CCC for a 30°C Temperature Rise ----------0.5 A per contact with all adjacent contacts powered**

Contact Gaps

FS5-15 positions

- **Initial**
  - **Min ---------- 0.9100 mm**
  - **Max ---------- 0.9659 mm**
- **After 100 Cycles**
  - **Min ---------- 0.9360 mm**
  - **Max ---------- 1.0160 mm**
- **Thermal**
  - **Min ---------- 1.0100 mm**
  - **Max ---------- 1.0780 mm**
- **Humidity**
  - **Min ---------- 1.0299 mm**
  - **Max ---------- 1.0939 mm**

Contact Gaps

FS5-30 positions

- **Initial**
  - **Min ---------- 0.9101 mm**
  - **Max ---------- 0.9541 mm**
- **After 100 Cycles**
  - **Min ---------- 0.9440 mm**
  - **Max ---------- 1.0580 mm**
- **Thermal**
  - **Min ---------- 1.0220 mm**
  - **Max ---------- 1.1160 mm**
- **Humidity**
  - **Min ---------- 1.0441 mm**
  - **Max ---------- 1.1281 mm**

Contact Gaps

FT5-15 positions

- **Initial**
  - **Min---------- 1.2098 mm**
  - **Max ---------- 1.2898 mm**
- **After 100 Cycles**
  - **Min---------- 1.2060 mm**
  - **Max ---------- 1.2720mm**
- **Thermal**
  - **Min---------- 1.2260 mm**
  - **Max ---------- 1.2940 mm**
- **Humidity**
  - **Min---------- 1.1981 mm**
  - **Max ---------- 1.2681 mm**

Contact Gaps

FT5-30 positions

- **Initial**
  - **Min---------- 1.1779 mm**
  - **Max ---------- 1.2819 mm**
- **After 100 Cycles**
  - **Min---------- 1.1740 mm**
  - **Max ---------- 1.2820 mm**
- **Thermal**
  - **Min---------- 1.1880 mm**
  - **Max ---------- 1.2840 mm**
- **Humidity**
  - **Min---------- 1.1701 mm**
  - **Max ---------- 1.2781 mm**

Mating – Unmating Forces

15 positions

- **Initial**
  - **Mating**
    - **Min ---------- 1.63 Lbs**
    - **Max---------- 1.94 Lbs**
  - **Unmating**
    - **Min ---------- 0.62 Lbs**
    - **Max---------- 0.97 Lbs**
- **After 25 Cycles**
  - **Mating**
    - **Min ---------- 1.51 Lbs**
    - **Max---------- 1.88 Lbs**
  - **Unmating**
    - **Min ---------- 0.69 Lbs**
    - **Max---------- 1.09 Lbs**
- **After 50 Cycles**
  - **Mating**
    - **Min ---------- 1.57 Lbs**
    - **Max---------- 1.95 Lbs**
  - **Unmating**
    - **Min ---------- 0.72 Lbs**
    - **Max---------- 1.17 Lbs**
- **After 75 Cycles**
  - **Mating**
    - **Min ---------- 1.53 Lbs**
    - **Max---------- 2.04 Lbs**
  - **Unmating**
    - **Min ---------- 0.69 Lbs**
    - **Max---------- 1.28 Lbs**
- **After 100 Cycles**
  - **Mating**
    - **Min ---------- 1.14 Lbs**
    - **Max---------- 2.02 Lbs**
  - **Unmating**
    - **Min ---------- 0.70 Lbs**
    - **Max---------- 1.35 Lbs**
- **Thermal**
  - **Mating**
    - **Min ---------- 0.95 Lbs**
    - **Max---------- 1.25 Lbs**
  - **Unmating**
    - **Min ---------- 0.53 Lbs**
    - **Max---------- 0.90 Lbs**
- **Humidity**
  - **Mating**
    - **Min ---------- 0.87 Lbs**
    - **Max---------- 1.22 Lbs**
  - **Unmating**
    - **Min ---------- 0.60 Lbs**
    - **Max---------- 0.81 Lbs**

Mating – Unmating Forces

30 positions

- **Initial**
  - **Mating**
    - **Min ---------- 3.42 Lbs**
    - **Max---------- 4.32 Lbs**
  - **Unmating**
    - **Min ---------- 1.55 Lbs**
    - **Max---------- 2.10 Lbs**
- **After 25 Cycles**
  - **Mating**
    - **Min ---------- 3.62 Lbs**
    - **Max---------- 4.49 Lbs**
  - **Unmating**
    - **Min ---------- 2.11 Lbs**
    - **Max---------- 2.55 Lbs**
- **After 50 Cycles**
  - **Mating**
    - **Min ---------- 3.84 Lbs**
    - **Max---------- 4.75 Lbs**
  - **Unmating**
    - **Min ---------- 1.90 Lbs**
    - **Max---------- 2.89 Lbs**
- **After 75 Cycles**
  - **Mating**
    - **Min ---------- 4.04 Lbs**
    - **Max---------- 5.03 Lbs**
  - **Unmating**
    - **Min ---------- 2.07 Lbs**
    - **Max---------- 2.99 Lbs**
- **After 100 Cycles**
  - **Mating**
    - **Min ---------- 4.21 Lbs**
    - **Max---------- 5.25 Lbs**
  - **Unmating**
    - **Min ---------- 2.55 Lbs**
    - **Max---------- 3.21 Lbs**
- **Thermal**
  - **Mating**
    - **Min ---------- 2.38 Lbs**
    - **Max---------- 2.88 Lbs**
  - **Unmating**
    - **Min ---------- 1.54 Lbs**
    - **Max---------- 2.12 Lbs**
- **Humidity**
  - **Mating**
    - **Min ---------- 2.19 Lbs**
    - **Max---------- 2.90 Lbs**
  - **Unmating**
    - **Min ---------- 1.52 Lbs**
    - **Max---------- 2.00 Lbs**

Normal Force at 0.006'' deflection

- **Initial**
  - **Min----------75.50 gf Set ----- 0.0005''**
  - **Max ----------84.70 gf Set ----- 0.0010''**
- **Thermal**
  - **Min----------80.10 gf**
  - **Max ----------86.30 gf**

Insulation Resistance minimums, IR

- **Initial**
  - **Mated---------- 100000 Meg Ω ---------- Pass**
  - **Unmated ---------- 100000 Meg Ω ---------- Pass**
- **Thermal**
  - **Mated---------- 100000 Meg Ω ---------- Pass**
  - **Unmated ---------- 100000 Meg Ω ---------- Pass**
- **Humidity**
  - **Mated---------- 100000 Meg Ω ---------- Pass**
  - **Unmated ---------- 100000 Meg Ω ---------- Pass**

Dielectric Withstanding Voltage minimums, DWV

- **Minimums**
  - **Breakdown Voltage----------720 VAC**
  - **Test Voltage ----------540 VAC**
  - **Working Voltage ----------180 VAC**
- **Initial DWV----------Passed**
- **Thermal DWV----------Passed**
- **Humidity DWV----------Passed**

LLCR Durability (184 LLCR test points)

Static Mate

- **Initial ---------- 21.5mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms ---------- 184 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 ---------- 167 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 15 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 2 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 ---------- 184 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**

LLCR Durability (184 LLCR test points)

Assemblies mated static then Shifted 0.5mm X and Y 25 cycles

- **Initial ---------- 25.6mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms ---------- 184 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 ---------- 177 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 5 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 1 Points ---------- Acceptable**
  - **+15.1 to +50.0 mOhms ---------- 1 Points ---------- Marginal**
  - **+50.1 to +2000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+2000 mOhms ---------- 0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms ---------- 160 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 1 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**

Note: One sample was removed after the humidity sequence due to damage from test fixture

LLCR Gas Tight (184 LLCR test points)

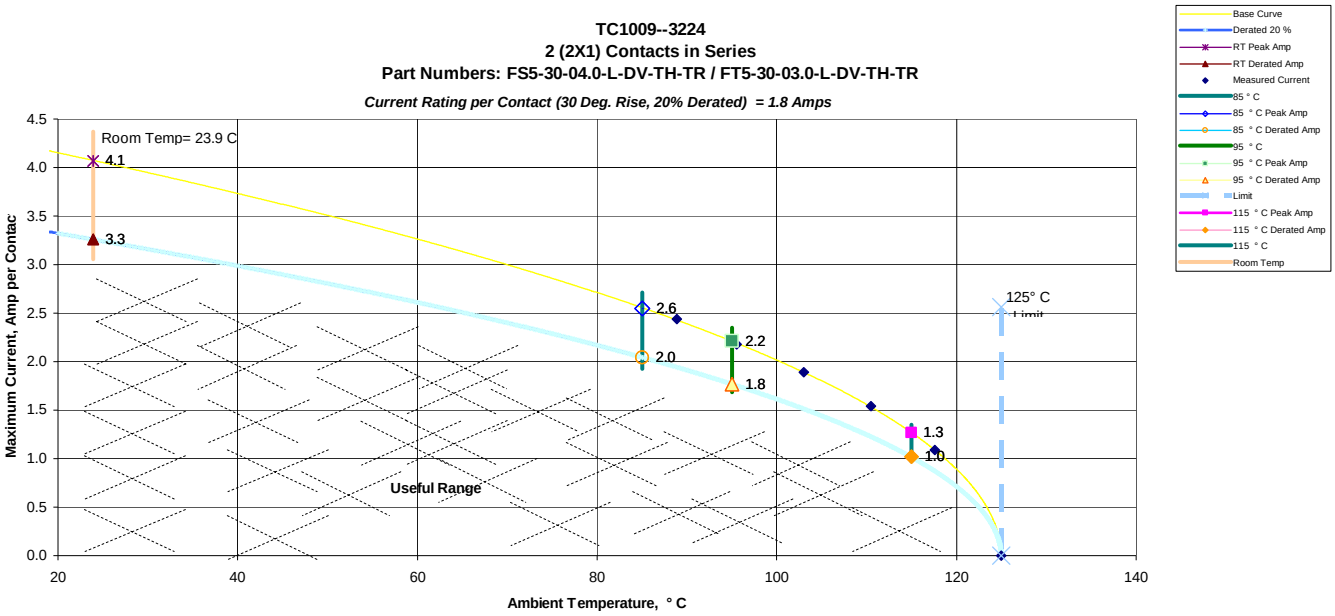
- **Initial ---------- 25.6mOhms Max**
- **Gas-Tight**
  - **<= +5.0 mOhms ---------- 184 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 0 Points ---------- Minor**
  - **+10.1 to +15.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+15.1 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.1 to +2000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+2000 mOhms ---------- 0 Points ---------- Open Failure**

DATA SUMMARIES

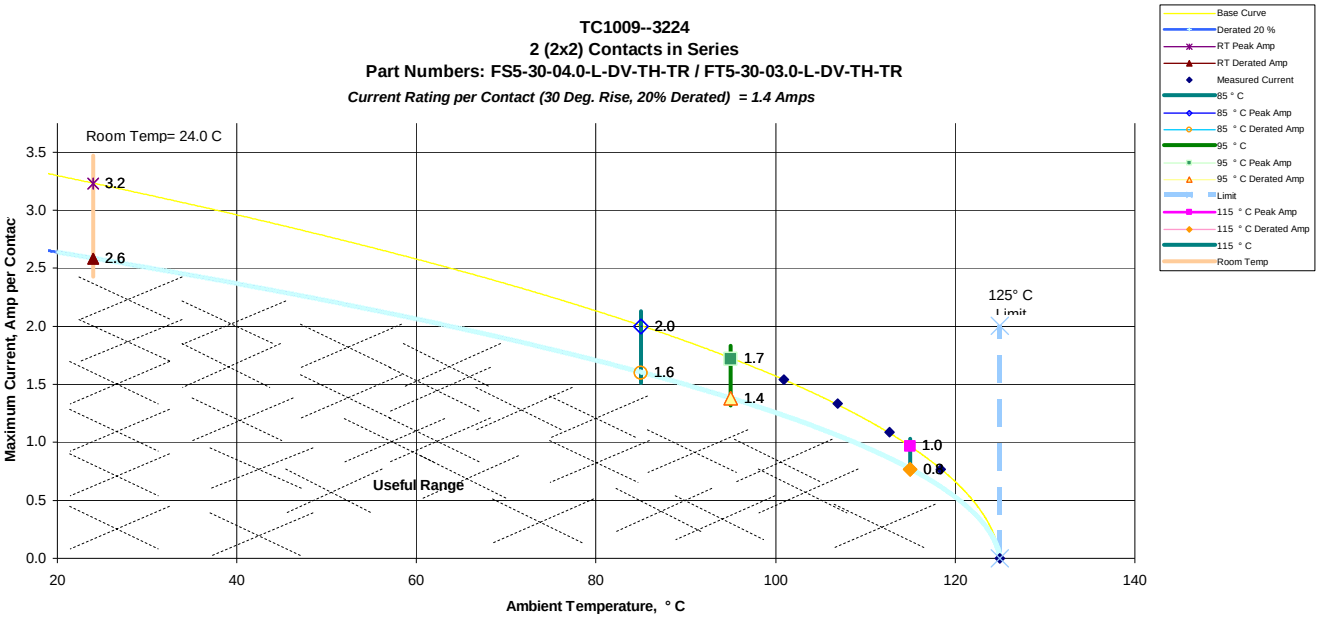
TEMPERATURE RISE (Current Carrying Capacity, CCC):

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:

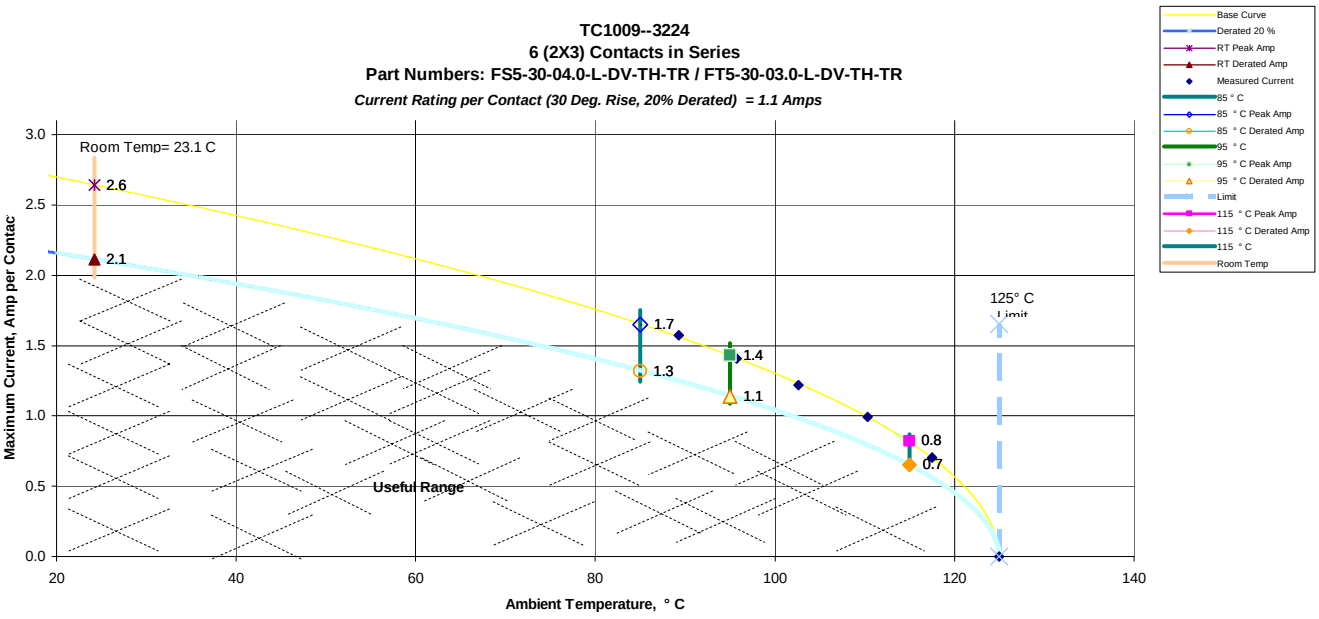
    a. Linear configuration with 2 adjacent conductors/contacts powered



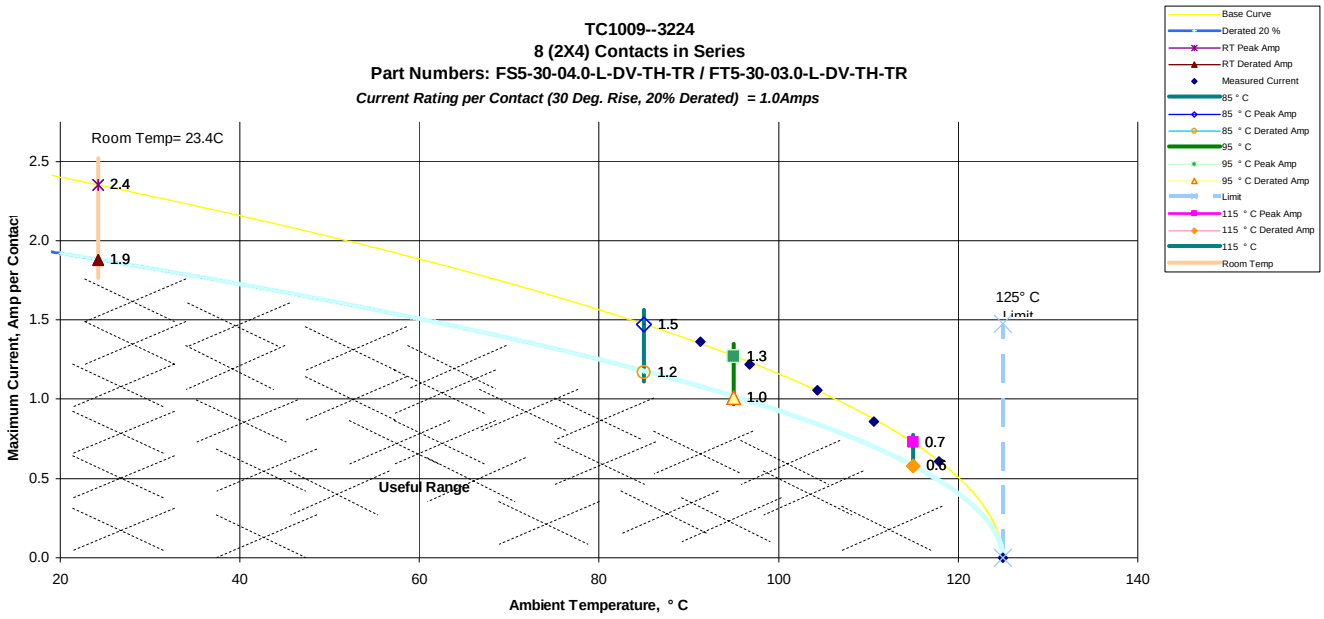
b. Linear configuration with 4 adjacent conductors/contacts powered



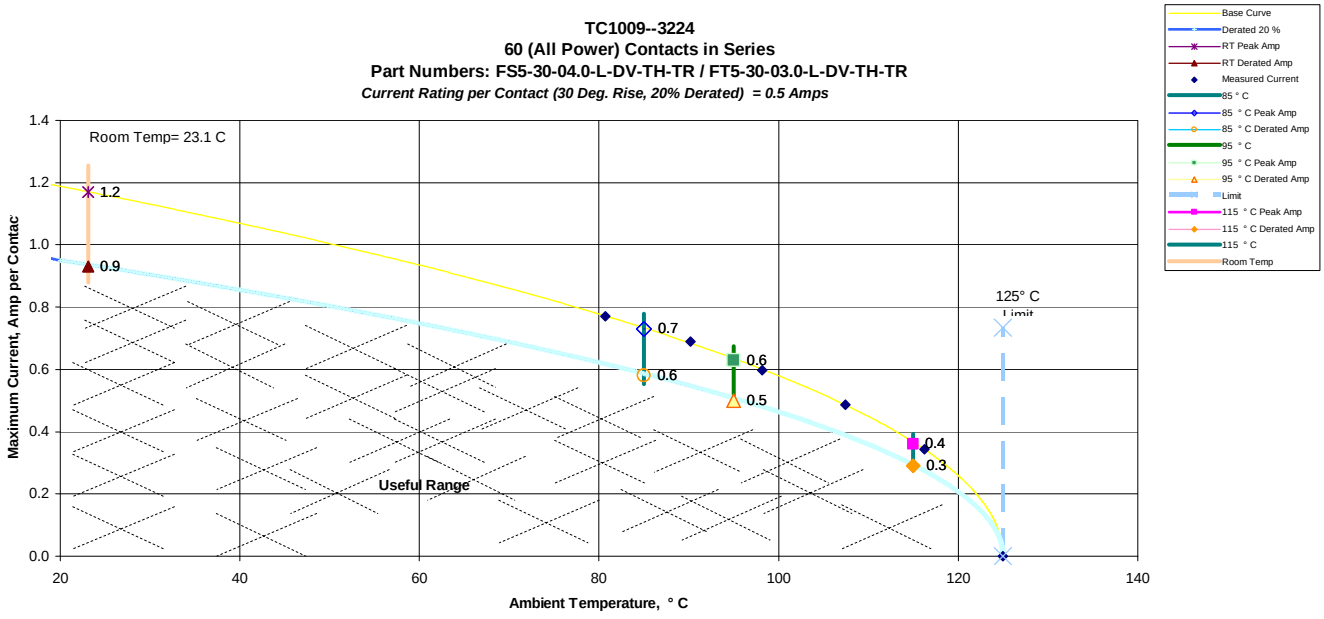
c. Linear configuration with 6 adjacent conductors/contacts powered



d. Linear configuration with 8 adjacent conductors/contacts powered



e. Linear configuration with all adjacent conductors/contacts powered



DATA SUMMARIES Continued

CONTACT GAPS:

FS5-15 positions

Initial		After 100 Cycles		After Thermal		After Humidity	
Units:	mm	Units:	mm	Units:	mm	Units:	mm
Minimum	0.9100	*Minimum*	0.9360	*Minimum*	1.0100	*Minimum*	1.0299
Maximum	0.9659	*Maximum*	1.0160	*Maximum*	1.0780	*Maximum*	1.0939
Average	0.9363	*Average*	0.9759	*Average*	1.0477	*Average*	1.0621
St. Dev.	0.0102	*St. Dev.*	0.0198	*St. Dev.*	0.0143	*St. Dev.*	0.0142
Count	150	*Count*	150	*Count*	150	*Count*	150

FS5-30 positions

Initial		After 100 Cycles		After Thermal		After Humidity	
Units:	mm	Units:	mm	Units:	mm	Units:	mm
Minimum	0.9101	*Minimum*	0.9440	*Minimum*	1.0220	*Minimum*	1.0441
Maximum	0.9541	*Maximum*	1.0580	*Maximum*	1.1160	*Maximum*	1.1281
Average	0.9363	*Average*	0.9886	*Average*	1.0616	*Average*	1.0833
St. Dev.	0.0093	*St. Dev.*	0.0255	*St. Dev.*	0.0191	*St. Dev.*	0.0188
Count	300	*Count*	300	*Count*	300	*Count*	300

FT5-15 positions

Initial		After 100 Cycles		After Thermal		After Humidity	
Units:	mm	Units:	mm	Units:	mm	Units:	mm
Minimum	1.2098	*Minimum*	1.2060	*Minimum*	1.2260	*Minimum*	1.1981
Maximum	1.2898	*Maximum*	1.2720	*Maximum*	1.2940	*Maximum*	1.2681
Average	1.2598	*Average*	1.2559	*Average*	1.2628	*Average*	1.2486
St. Dev.	0.0097	*St. Dev.*	0.0084	*St. Dev.*	0.0092	*St. Dev.*	0.0092
Count	150	*Count*	150	*Count*	150	*Count*	150

FT5-30 positions

Initial		After 100 Cycles		After Thermal		After Humidity	
Units:	mm	Units:	mm	Units:	mm	Units:	mm
Minimum	1.1779	*Minimum*	1.1740	*Minimum*	1.1880	*Minimum*	1.1701
Maximum	1.2819	*Maximum*	1.2820	*Maximum*	1.2840	*Maximum*	1.2781
Average	1.2619	*Average*	1.2611	*Average*	1.2635	*Average*	1.2546
St. Dev.	0.0105	*St. Dev.*	0.0116	*St. Dev.*	0.0107	*St. Dev.*	0.0108
Count	300	*Count*	300	*Count*	300	*Count*	300

DATA SUMMARIES Continued

MATING/UNMATING:

15 positions

	Initial				After 25 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	7.25	1.63	2.76	0.62	6.72	1.51	0.31	0.69
Maximum	8.63	1.94	4.31	0.97	8.36	1.88	4.85	1.09
Average	8.05	**1.81**	3.26	**0.73**	7.65	**1.72**	3.31	**0.74**
St Dev	0.51	0.11	0.48	0.11	0.54	0.12	1.20	0.27
Count	10	10	10	10	10	10	10	10

	After 50 Cycles				After 75 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	6.98	1.57	3.20	0.72	6.81	1.53	3.07	0.69
Maximum	8.67	1.95	5.20	1.17	9.07	2.04	5.69	1.28
Average	7.89	**1.77**	4.00	**0.90**	8.28	**1.86**	4.19	**0.94**
St Dev	0.52	0.12	0.73	0.16	0.67	0.15	0.96	0.22
Count	10	10	10	10	10	10	10	10

	After 100 Cycles				After Thermals			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	5.07	1.14	3.11	0.70	4.23	0.95	2.36	0.53
Maximum	8.98	2.02	6.00	1.35	5.56	1.25	4.00	0.90
Average	8.00	**1.80**	4.36	**0.98**	4.63	**1.04**	3.37	**0.76**
St Dev	1.22	0.27	0.97	0.22	0.38	0.09	0.46	0.10
Count	10	10	10	10	10	10	10	10

	After Humidity			
	Mating		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	3.87	0.87	2.67	0.60
Maximum	5.43	1.22	3.60	0.81
Average	4.67	**1.05**	3.22	**0.72**
St Dev	0.51	0.11	0.34	0.08
Count	10	10	10	10

DATA SUMMARIES Continued

MATING/UNMATING:

30 positions

	Initial				After 25 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	15.21	3.42	6.89	1.55	16.10	3.62	9.39	2.11
Maximum	19.22	4.32	9.34	2.10	19.97	4.49	11.34	2.55
Average	17.24	**3.88**	8.09	**1.82**	18.42	**4.14**	10.49	**2.36**
St Dev	1.43	0.32	0.89	0.20	1.18	0.27	0.62	0.14
Count	10	10	10	10	10	10	10	10

	After 50 Cycles				After 75 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	17.08	3.84	8.45	1.90	17.97	4.04	9.21	2.07
Maximum	21.13	4.75	12.85	2.89	22.37	5.03	13.30	2.99
Average	19.46	**4.37**	11.18	**2.51**	20.93	**4.71**	12.12	**2.73**
St Dev	1.29	0.29	1.31	0.29	1.27	0.29	1.20	0.27
Count	10	10	10	10	10	10	10	10

	After 100 Cycles				After Thermals			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	18.73	4.21	11.34	2.55	10.59	2.38	6.85	1.54
Maximum	23.35	5.25	14.28	3.21	12.81	2.88	9.43	2.12
Average	21.80	**4.90**	12.89	**2.90**	11.94	**2.68**	7.84	**1.76**
St Dev	1.40	0.32	0.82	0.18	0.69	0.16	0.67	0.15
Count	10	10	10	10	10	10	10	10

	After Humidity			
	Mating		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	9.74	2.19	6.76	1.52
Maximum	12.90	2.90	8.90	2.00
Average	11.50	**2.59**	7.49	**1.68**
St Dev	0.86	0.19	0.60	0.13
Count	10	10	10	10

DATA SUMMARIES Continued

NORMAL FORCE (FOR CONTACTS TESTED IN THE HOUSING):

1) Calibrated force gauges are used along with computer controlled positioning equipment.
2) For Normal force 8-10 measurements are taken and the averages reported.

Initial	Deflections in inches Forces in Grams										
	0.0006	**0.0012**	**0.0018**	**0.0024**	**0.0030**	**0.0036**	**0.0042**	**0.0048**	**0.0054**	**0.0060**	***SET***
Averages	8.95	17.21	25.34	33.16	41.35	49.49	57.38	64.58	71.40	78.13	0.0009
Min	6.50	14.20	21.00	29.70	37.90	46.10	54.00	61.10	68.20	75.50	0.0005
Max	17.30	25.90	33.90	41.40	49.20	57.60	64.90	71.60	78.30	84.70	0.0010
St. Dev	3.445	3.655	3.813	3.661	3.469	3.545	3.358	3.223	3.115	2.935	0.0002
Count	8	8	8	8	8	8	8	8	8	8	8

After Thermals	Deflections in inches Forces in Grams										
	0.0006	**0.0012**	**0.0018**	**0.0024**	**0.0030**	**0.0036**	**0.0042**	**0.0048**	**0.0054**	**0.0060**	***SET***
Averages	8.40	17.13	25.53	34.21	43.03	51.48	59.82	68.34	76.78	84.27	0.0008
Min	7.70	16.50	24.90	32.40	41.30	49.40	58.10	66.00	73.50	80.10	0.0008
Max	9.00	17.80	26.70	36.10	45.10	53.20	61.70	70.60	78.90	86.30	0.0009
St. Dev	0.447	0.495	0.589	1.066	1.265	1.344	1.222	1.506	1.741	2.013	0.0001
Count	9	9	9	9	9	9	9	9	9	9	9

DATA SUMMARIES Continued

INSULATION RESISTANCE (IR):

	Pin to Pin		
	Mated	Unmated	Unmated
Minimum	**FS5/FT5**	**FS5**	**FT5**
Initial	100000	100000	100000
Thermal	100000	100000	100000
Humidity	100000	100000	100000

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

Voltage Rating Summary	
Minimum	**FS5/FT5**
Break Down Voltage	720
Test Voltage	540
Working Voltage	180

Pin to Pin	
Initial Test Voltage	Passed
After Thermal Test Voltage	Passed
After Humidity Test Voltage	Passed

DATA SUMMARIES Continued

LLCR:

1) A total of 184 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. <= +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

Static Mate (Group A)

Date	2010-3-15	2010-3-16	2010-3-31	2010-4-14
Room Temp C	21	21	22	24
RH	32%	34%	29%	34%
Name	Gary Lomax	Gary Lomax	Gary Lomax	Gary Lomax
mOhm values	**Actual Initial**	**Delta 25 Cycles**	**Delta Thermal**	**Delta Humidity**
Average	20.5	-0.1	1.0	-0.1
St. Dev.	0.4	1.0	2.5	0.9
Min	19.4	-2.3	-1.9	-2.3
Max	21.5	3.0	14.2	2.2
Count	184	184	184	184

How many samples are being tested?	8
How many contacts are on each board?	23

	Stable	Minor	Acceptable	Marginal	Unstable	Open
25 Cycles	184	0	0	0	0	0
Thermal	167	15	2	0	0	0
Humidity	184	0	0	0	0	0

DATA SUMMARIES Continued

Assemblies mated static then shifted 0.5mm X and Y 25 cycles (Group B)

Date	2010-3-16	2010-3-16	2010-3-31	2010-4-14
Room Temp C	22	23	22	24
RH	34%	33%	29%	34%
Name	Gary Lomax	Gary Lomax	Gary Lomax	Gary Lomax
mOhm values	**Actual Initial**	**Delta 25 Cycles**	**Delta Thermal**	**Delta Humidity**
Average	20.6	0.0	0.8	-0.2
St. Dev.	1.2	0.7	3.2	0.9
Min	19.1	-2.5	-1.9	-3.7
Max	25.6	4.1	37.2	5.7
Count	184	184	184	161

How many samples are being tested?	8
How many contacts are on each board?	23

	Stable	Minor	Acceptable	Marginal	Unstable	Open
25 Cycles	184	0	0	0	0	0
Thermal	177	5	1	1	0	0
Humidity	160	1	0	0	0	0

DATA SUMMARIES Continued

GAS TIGHT:

1) A total of 184 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. <= +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

Date	2010-3-10	2010-3-12
Room Temp C	24	23
RH	39%	44%
Name	Gary Lomax	Gary Lomax
mOhm values	**Actual Initial**	**Delta Gas Tight**
Average	20.6	0.1
St. Dev.	1.0	0.2
Min	19.2	-0.4
Max	25.6	1.9
Count	184	184

How many samples are being tested?	8
How many contacts are on each board?	23

	Stable	Minor	Acceptable	Marginal	Unstable	Open
Gas Tight	184	0	0	0	0	0

DATA

CONTACT GAPS:

FS5-15 Positions

Initial

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.9320	0.9559	0.9420	0.9539	0.9360	0.9659	0.9420	0.9480	0.9380	0.9480
2	0.9340	0.9579	0.9400	0.9559	0.9280	0.9579	0.9340	0.9380	0.9320	0.9539
3	0.9380	0.9539	0.9400	0.9440	0.9340	0.9539	0.9360	0.9440	0.9260	0.9480
4	0.9519	0.9519	0.9280	0.9460	0.9360	0.9360	0.9340	0.9320	0.9440	0.9420
5	0.9380	0.9300	0.9300	0.9320	0.9360	0.9200	0.9320	0.9360	0.9280	0.9420
6	0.9360	0.9320	0.9400	0.9300	0.9480	0.9400	0.9360	0.9380	0.9320	0.9260
7	0.9380	0.9200	0.9320	0.9240	0.9539	0.9240	0.9340	0.9420	0.9320	0.9280
8	0.9539	0.9240	0.9420	0.9240	0.9559	0.9120	0.9400	0.9460	0.9320	0.9180
9	0.9440	0.9240	0.9380	0.9320	0.9480	0.9180	0.9400	0.9420	0.9340	0.9280
10	0.9420	0.9240	0.9539	0.9360	0.9460	0.9260	0.9420	0.9480	0.9380	0.9320
11	0.9340	0.9360	0.9480	0.9400	0.9440	0.9280	0.9440	0.9400	0.9400	0.9320
12	0.9240	0.9300	0.9420	0.9400	0.9460	0.9340	0.9220	0.9280	0.9240	0.9320
13	0.9300	0.9360	0.9400	0.9380	0.9420	0.9380	0.9320	0.9440	0.9240	0.9380
14	0.9280	0.9360	0.9380	0.9380	0.9240	0.9420	0.9220	0.9220	0.9220	0.9460
15	0.9200	0.9220	0.9380	0.9260	0.9300	0.9340	0.9100	0.9260	0.9160	0.9300

After 100 Cycles

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.9840	0.9880	0.9600	0.9700	0.9640	1.0120	1.0040	1.0160	1.0100	1.0140
2	0.9840	0.9780	0.9680	0.9640	0.9680	0.9980	0.9900	1.0080	1.0080	1.0100
3	0.9780	0.9760	0.9580	0.9600	0.9500	0.9860	0.9700	0.9940	1.0020	1.0020
4	0.9780	0.9660	0.9500	0.9640	0.9620	0.9840	0.9800	1.0000	1.0040	0.9980
5	0.9820	0.9580	0.9480	0.9620	0.9580	0.9800	0.9660	1.0000	1.0020	0.9880
6	0.9820	0.9480	0.9500	0.9500	0.9620	0.9800	0.9760	1.0060	1.0020	0.9660
7	0.9720	0.9480	0.9460	0.9460	0.9600	0.9680	0.9660	0.9940	0.9980	0.9720
8	0.9800	0.9420	0.9520	0.9460	0.9640	0.9640	0.9720	1.0000	1.0020	0.9800
9	0.9840	0.9420	0.9460	0.9360	0.9560	0.9700	0.9660	0.9960	1.0020	0.9800
10	0.9880	0.9420	0.9680	0.9460	0.9620	0.9720	0.9740	1.0040	1.0100	0.9840
11	0.9800	0.9500	0.9580	0.9560	0.9640	0.9660	0.9700	1.0000	1.0060	0.9860
12	0.9720	0.9460	0.9580	0.9500	0.9660	0.9740	0.9740	0.9900	1.0060	0.9800
13	0.9780	0.9480	0.9560	0.9560	0.9620	0.9840	0.9780	1.0020	1.0020	0.9860
14	0.9780	0.9540	0.9620	0.9640	0.9600	0.9920	0.9900	1.0020	1.0080	0.9900
15	0.9700	0.9560	0.9620	0.9480	0.9620	0.9880	0.9860	0.9920	1.0000	0.9900

After Thermal

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	1.0380	1.0520	1.0240	1.0380	1.0300	1.0500	1.0560	1.0500	1.0600	1.0760
2	1.0340	1.0440	1.0200	1.0360	1.0300	1.0480	1.0560	1.0440	1.0620	1.0660
3	1.0460	1.0400	1.0280	1.0400	1.0280	1.0480	1.0400	1.0520	1.0660	1.0600
4	1.0500	1.0420	1.0220	1.0320	1.0340	1.0520	1.0520	1.0580	1.0720	1.0680
5	1.0540	1.0460	1.0320	1.0260	1.0360	1.0580	1.0440	1.0620	1.0740	1.0720

6	1.0500	1.0480	1.0380	1.0360	1.0520	1.0620	1.0500	1.0640	1.0740	1.0480
7	1.0500	1.0360	1.0360	1.0440	1.0560	1.0580	1.0480	1.0740	1.0720	1.0480
8	1.0500	1.0320	1.0380	1.0340	1.0540	1.0580	1.0560	1.0700	1.0720	1.0500
9	1.0500	1.0320	1.0440	1.0340	1.0520	1.0560	1.0460	1.0680	1.0700	1.0640
10	1.0460	1.0420	1.0420	1.0380	1.0500	1.0600	1.0540	1.0660	1.0740	1.0680
11	1.0500	1.0320	1.0400	1.0400	1.0400	1.0540	1.0540	1.0680	1.0780	1.0640
12	1.0380	1.0360	1.0300	1.0320	1.0340	1.0620	1.0500	1.0540	1.0700	1.0500
13	1.0420	1.0300	1.0240	1.0340	1.0340	1.0520	1.0440	1.0600	1.0700	1.0620
14	1.0360	1.0340	1.0240	1.0360	1.0300	1.0360	1.0460	1.0500	1.0620	1.0640
15	1.0360	1.0240	1.0220	1.0100	1.0260	1.0420	1.0360	1.0420	1.0520	1.0520

After Humidity

Units: mm

Pos.#	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**	**B9**	**B10**
1	1.0519	1.0559	1.0359	1.0519	1.0379	1.0699	1.0679	1.0699	1.0659	1.0839
2	1.0539	1.0539	1.0379	1.0599	1.0339	1.0659	1.0699	1.0639	1.0719	1.0879
3	1.0619	1.0519	1.0379	1.0479	1.0339	1.0699	1.0559	1.0619	1.0679	1.0799
4	1.0619	1.0579	1.0479	1.0519	1.0539	1.0699	1.0659	1.0739	1.0739	1.0819
5	1.0699	1.0539	1.0459	1.0499	1.0579	1.0719	1.0599	1.0899	1.0759	1.0859
6	1.0759	1.0519	1.0499	1.0479	1.0619	1.0799	1.0699	1.0919	1.0819	1.0619
7	1.0659	1.0499	1.0479	1.0539	1.0659	1.0639	1.0659	1.0799	1.0859	1.0739
8	1.0719	1.0539	1.0499	1.0539	1.0679	1.0779	1.0759	1.0819	1.0839	1.0759
9	1.0719	1.0539	1.0459	1.0559	1.0559	1.0739	1.0639	1.0819	1.0879	1.0679
10	1.0699	1.0519	1.0539	1.0559	1.0659	1.0779	1.0679	1.0899	1.0879	1.0759
11	1.0699	1.0459	1.0479	1.0579	1.0579	1.0679	1.0659	1.0779	1.0939	1.0779
12	1.0579	1.0399	1.0439	1.0519	1.0599	1.0699	1.0559	1.0659	1.0759	1.0639
13	1.0519	1.0439	1.0479	1.0379	1.0599	1.0639	1.0579	1.0659	1.0779	1.0779
14	1.0479	1.0479	1.0379	1.0459	1.0519	1.0639	1.0599	1.0719	1.0739	1.0679
15	1.0439	1.0319	1.0299	1.0339	1.0479	1.0679	1.0559	1.0439	1.0619	1.0599

FS5-30 Positions

Initial

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.9261	0.9221	0.9281	0.9341	0.9281	0.9301	0.9361	0.9201	0.9301	0.9141
2	0.9341	0.9221	0.9301	0.9341	0.9381	0.9341	0.9341	0.9261	0.9361	0.9221
3	0.9341	0.9301	0.9321	0.9361	0.9321	0.9361	0.9361	0.9321	0.9321	0.9221
4	0.9301	0.9281	0.9401	0.9401	0.9381	0.9321	0.9361	0.9321	0.9321	0.9241
5	0.9321	0.9241	0.9321	0.9381	0.9341	0.9401	0.9341	0.9281	0.9301	0.9241
6	0.9481	0.9281	0.9401	0.9441	0.9461	0.9381	0.9461	0.9341	0.9461	0.9361
7	0.9441	0.9401	0.9481	0.9461	0.9521	0.9401	0.9481	0.9341	0.9441	0.9341
8	0.9441	0.9321	0.9421	0.9421	0.9481	0.9361	0.9421	0.9361	0.9461	0.9341
9	0.9341	0.9381	0.9461	0.9361	0.9441	0.9381	0.9401	0.9321	0.9241	0.9361
10	0.9381	0.9441	0.9481	0.9341	0.9501	0.9361	0.9301	0.9421	0.9261	0.9341
11	0.9281	0.9381	0.9521	0.9301	0.9461	0.9401	0.9221	0.9461	0.9181	0.9441
12	0.9221	0.9341	0.9481	0.9281	0.9501	0.9221	0.9261	0.9361	0.9121	0.9501
13	0.9261	0.9461	0.9481	0.9341	0.9501	0.9361	0.9221	0.9441	0.9121	0.9461
14	0.9241	0.9361	0.9461	0.9261	0.9421	0.9341	0.9101	0.9441	0.9121	0.9401
15	0.9221	0.9361	0.9441	0.9401	0.9481	0.9241	0.9181	0.9481	0.9121	0.9441
16	0.9241	0.9441	0.9501	0.9341	0.9481	0.9361	0.9201	0.9501	0.9201	0.9541
17	0.9181	0.9541	0.9461	0.9281	0.9461	0.9341	0.9241	0.9461	0.9181	0.9521
18	0.9121	0.9361	0.9461	0.9321	0.9441	0.9341	0.9121	0.9401	0.9221	0.9421
19	0.9241	0.9381	0.9421	0.9301	0.9381	0.9381	0.9141	0.9481	0.9221	0.9461
20	0.9261	0.9261	0.9441	0.9261	0.9501	0.9321	0.9181	0.9441	0.9201	0.9501
21	0.9321	0.9401	0.9401	0.9281	0.9341	0.9281	0.9341	0.9441	0.9221	0.9381
22	0.9401	0.9521	0.9401	0.9441	0.9461	0.9421	0.9401	0.9441	0.9401	0.9441
23	0.9421	0.9421	0.9441	0.9501	0.9461	0.9401	0.9481	0.9461	0.9481	0.9441
24	0.9461	0.9381	0.9441	0.9541	0.9481	0.9461	0.9461	0.9321	0.9461	0.9401
25	0.9441	0.9381	0.9421	0.9441	0.9401	0.9461	0.9381	0.9381	0.9381	0.9361
26	0.9461	0.9361	0.9361	0.9461	0.9461	0.9461	0.9341	0.9401	0.9361	0.9401
27	0.9361	0.9281	0.9241	0.9381	0.9261	0.9321	0.9261	0.9341	0.9281	0.9281
28	0.9361	0.9301	0.9301	0.9341	0.9401	0.9401	0.9401	0.9281	0.9381	0.9341
29	0.9461	0.9361	0.9301	0.9381	0.9381	0.9361	0.9341	0.9401	0.9401	0.9381
30	0.9461	0.9361	0.9401	0.9301	0.9341	0.9381	0.9401	0.9421	0.9381	0.9441

After 100 Cycles

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.9760	0.9780	0.9820	0.9740	1.0000	1.0200	1.0120	1.0020	1.0100	1.0100
2	0.9780	0.9660	0.9700	0.9800	1.0040	1.0220	1.0180	0.9980	1.0060	1.0080
3	0.9740	0.9600	0.9660	0.9660	1.0060	1.0160	1.0180	0.9880	1.0160	0.9900
4	0.9620	0.9600	0.9620	0.9600	0.9980	1.0040	1.0180	0.9880	1.0140	1.0000
5	0.9680	0.9740	0.9620	0.9680	1.0020	1.0080	1.0220	0.9960	1.0200	1.0100
6	0.9680	0.9600	0.9620	0.9700	1.0060	1.0060	1.0200	0.9860	1.0180	0.9940
7	0.9760	0.9620	0.9620	0.9780	1.0060	1.0020	1.0100	0.9860	1.0240	0.9960
8	0.9680	0.9600	0.9640	0.9680	1.0040	1.0000	1.0060	0.9840	1.0180	0.9980
9	0.9600	0.9680	0.9640	0.9640	1.0040	0.9900	1.0000	0.9840	1.0120	0.9920
10	0.9520	0.9600	0.9640	0.9620	0.9960	0.9840	0.9920	0.9900	1.0000	0.9940
11	0.9560	0.9560	0.9640	0.9520	0.9940	0.9920	0.9780	0.9840	1.0060	0.9920
12	0.9480	0.9600	0.9640	0.9480	0.9860	0.9940	0.9720	0.9920	1.0100	0.9980

13	0.9480	0.9600	0.9600	0.9480	0.9880	0.9940	0.9700	0.9820	0.9920	0.9900
14	0.9460	0.9580	0.9580	0.9460	0.9820	0.9980	0.9580	0.9820	0.9960	0.9800
15	0.9480	0.9580	0.9640	0.9480	0.9900	0.9920	0.9720	0.9880	0.9940	0.9900
16	0.9440	0.9520	0.9680	0.9480	0.9960	0.9980	0.9700	0.9840	0.9860	1.0020
17	0.9500	0.9540	0.9640	0.9560	0.9900	1.0020	0.9740	0.9880	1.0020	0.9980
18	0.9460	0.9560	0.9680	0.9540	1.0000	1.0120	0.9700	0.9860	1.0120	1.0040
19	0.9460	0.9520	0.9720	0.9580	0.9900	1.0060	0.9740	0.9960	1.0040	1.0180
20	0.9460	0.9560	0.9700	0.9560	1.0060	1.0140	0.9720	0.9940	1.0100	1.0180
21	0.9620	0.9620	0.9760	0.9660	1.0160	1.0160	0.9820	1.0020	1.0120	1.0200
22	0.9600	0.9540	0.9740	0.9680	1.0080	1.0260	0.9940	1.0000	1.0220	1.0340
23	0.9660	0.9560	0.9680	0.9740	1.0080	1.0260	0.9960	1.0040	1.0220	1.0280
24	0.9640	0.9580	0.9680	0.9720	1.0160	1.0280	1.0080	1.0060	1.0320	1.0380
25	0.9680	0.9640	0.9720	0.9800	1.0160	1.0360	1.0240	1.0220	1.0280	1.0460
26	0.9620	0.9520	0.9700	0.9760	1.0160	1.0280	1.0280	1.0220	1.0300	1.0580
27	0.9560	0.9520	0.9740	0.9780	1.0100	1.0280	1.0100	1.0180	1.0260	1.0420
28	0.9600	0.9580	0.9680	0.9780	1.0100	1.0240	1.0160	1.0180	1.0260	1.0440
29	0.9620	0.9640	0.9780	0.9900	1.0100	1.0240	1.0300	1.0300	1.0220	1.0360
30	0.9620	0.9680	0.9740	0.9840	1.0020	1.0220	1.0240	1.0240	1.0220	1.0400

After Thermal

Units: mm

Pos.#	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**	**B9**	**B10**
1	1.0360	1.0400	1.0260	1.0360	1.0540	1.0640	1.0540	1.0580	1.0600	1.0660
2	1.0320	1.0360	1.0340	1.0420	1.0540	1.0560	1.0680	1.0620	1.0640	1.0600
3	1.0340	1.0360	1.0360	1.0380	1.0580	1.0540	1.0740	1.0560	1.0580	1.0440
4	1.0380	1.0220	1.0320	1.0320	1.0620	1.0640	1.0760	1.0520	1.0740	1.0600
5	1.0420	1.0260	1.0380	1.0480	1.0620	1.0700	1.0720	1.0600	1.0760	1.0620
6	1.0420	1.0300	1.0380	1.0460	1.0680	1.0740	1.0860	1.0560	1.0820	1.0680
7	1.0560	1.0300	1.0400	1.0400	1.0680	1.0740	1.0820	1.0560	1.0820	1.0600
8	1.0540	1.0320	1.0440	1.0480	1.0780	1.0660	1.0820	1.0640	1.0880	1.0640
9	1.0440	1.0380	1.0520	1.0560	1.0780	1.0740	1.0720	1.0680	1.0740	1.0620
10	1.0560	1.0480	1.0560	1.0500	1.0760	1.0640	1.0720	1.0740	1.0820	1.0740
11	1.0420	1.0400	1.0500	1.0380	1.0800	1.0580	1.0600	1.0600	1.0780	1.0720
12	1.0480	1.0380	1.0460	1.0320	1.0660	1.0580	1.0620	1.0580	1.0740	1.0720
13	1.0440	1.0420	1.0560	1.0360	1.0740	1.0660	1.0580	1.0600	1.0640	1.0620
14	1.0380	1.0440	1.0680	1.0460	1.0780	1.0780	1.0600	1.0680	1.0720	1.0520
15	1.0400	1.0500	1.0660	1.0480	1.0800	1.0760	1.0540	1.0700	1.0620	1.0660
16	1.0420	1.0500	1.0600	1.0500	1.0780	1.0760	1.0600	1.0680	1.0660	1.0740
17	1.0340	1.0440	1.0540	1.0480	1.0840	1.0800	1.0480	1.0600	1.0680	1.0700
18	1.0380	1.0480	1.0540	1.0500	1.0800	1.0800	1.0500	1.0660	1.0740	1.0760
19	1.0340	1.0440	1.0600	1.0460	1.0700	1.0900	1.0600	1.0640	1.0760	1.0780
20	1.0380	1.0400	1.0580	1.0460	1.0760	1.0860	1.0680	1.0720	1.0880	1.0880
21	1.0420	1.0460	1.0560	1.0440	1.0900	1.0800	1.0660	1.0780	1.0800	1.0860
22	1.0440	1.0500	1.0560	1.0560	1.0920	1.0900	1.0680	1.0820	1.0940	1.1000
23	1.0480	1.0500	1.0500	1.0540	1.0880	1.0940	1.0680	1.0800	1.0940	1.0980
24	1.0440	1.0480	1.0540	1.0640	1.0820	1.0900	1.0760	1.0800	1.1000	1.1140
25	1.0480	1.0400	1.0560	1.0580	1.0860	1.0940	1.0960	1.0820	1.1040	1.1080
26	1.0480	1.0360	1.0460	1.0460	1.0820	1.0880	1.0800	1.0820	1.1020	1.1160
27	1.0320	1.0340	1.0460	1.0440	1.0760	1.0780	1.0740	1.0820	1.0900	1.1040
28	1.0280	1.0280	1.0400	1.0400	1.0680	1.0800	1.0820	1.0880	1.0880	1.0980

29	1.0260	1.0280	1.0360	1.0380	1.0660	1.0700	1.0700	1.0840	1.0820	1.0900
30	1.0360	1.0300	1.0320	1.0380	1.0500	1.0720	1.0740	1.0780	1.0760	1.0800

After Humidity

Units: mm

Pos.#	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**	**B9**	**B10**
1	1.0541	1.0461	1.0501	1.0601	1.0701	1.0781	1.0981	1.0921	1.0881	1.0921
2	1.0501	1.0481	1.0561	1.0581	1.0821	1.0921	1.1021	1.1001	1.1021	1.1061
3	1.0521	1.0481	1.0561	1.0521	1.0841	1.0921	1.0941	1.0961	1.1021	1.1141
4	1.0581	1.0501	1.0601	1.0621	1.0921	1.1021	1.1021	1.1101	1.1121	1.1221
5	1.0581	1.0561	1.0681	1.0721	1.1041	1.1161	1.1081	1.1041	1.1121	1.1241
6	1.0681	1.0641	1.0781	1.0801	1.1001	1.1181	1.1141	1.1141	1.1101	1.1281
7	1.0761	1.0621	1.0781	1.0761	1.1041	1.1161	1.1061	1.1041	1.1101	1.1221
8	1.0721	1.0601	1.0781	1.0741	1.0981	1.1121	1.1001	1.1041	1.1221	1.1181
9	1.0701	1.0701	1.0861	1.0761	1.1101	1.1141	1.0961	1.1021	1.1101	1.1201
10	1.0761	1.0721	1.0841	1.0641	1.1101	1.1101	1.0881	1.1081	1.1061	1.1141
11	1.0761	1.0601	1.0841	1.0681	1.1041	1.1061	1.0841	1.1021	1.1121	1.1101
12	1.0701	1.0541	1.0821	1.0641	1.0881	1.1061	1.0761	1.0901	1.1061	1.1061
13	1.0701	1.0641	1.0841	1.0701	1.1021	1.1021	1.0801	1.0961	1.0941	1.1041
14	1.0581	1.0681	1.0761	1.0681	1.0941	1.0981	1.0741	1.0921	1.1021	1.0981
15	1.0701	1.0661	1.0821	1.0621	1.1081	1.0901	1.0841	1.0921	1.1021	1.0941
16	1.0601	1.0721	1.0821	1.0621	1.0981	1.0901	1.0741	1.0921	1.0821	1.0941
17	1.0601	1.0681	1.0861	1.0701	1.0901	1.0841	1.0761	1.0861	1.0901	1.0721
18	1.0561	1.0601	1.0861	1.0621	1.0981	1.0821	1.0821	1.0881	1.0921	1.0881
19	1.0681	1.0661	1.0741	1.0681	1.0881	1.0901	1.0781	1.0861	1.0861	1.0961
20	1.0661	1.0621	1.0741	1.0601	1.0941	1.0841	1.0801	1.0901	1.0981	1.0921
21	1.0581	1.0581	1.0701	1.0641	1.0961	1.0821	1.0901	1.0881	1.0921	1.0821
22	1.0641	1.0701	1.0761	1.0761	1.0981	1.0921	1.0961	1.0881	1.1021	1.0841
23	1.0741	1.0641	1.0721	1.0701	1.0981	1.0881	1.0981	1.0861	1.1061	1.0841
24	1.0721	1.0641	1.0661	1.0741	1.1041	1.0861	1.1081	1.0801	1.1041	1.0901
25	1.0781	1.0661	1.0661	1.0721	1.0921	1.0901	1.0981	1.0841	1.1081	1.0941
26	1.0741	1.0641	1.0621	1.0721	1.0901	1.0921	1.1021	1.0881	1.1081	1.0901
27	1.0561	1.0441	1.0521	1.0621	1.0801	1.0881	1.0921	1.0781	1.1041	1.0921
28	1.0561	1.0481	1.0501	1.0521	1.0801	1.0841	1.0881	1.0721	1.1001	1.0721
29	1.0581	1.0481	1.0561	1.0521	1.0761	1.0861	1.0821	1.0721	1.0881	1.0941
30	1.0501	1.0481	1.0501	1.0521	1.0701	1.0841	1.0741	1.0701	1.0801	1.0881

FT5-15 Positions

Initial

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	1.2698	1.2718	1.2598	1.2598	1.2538	1.2678	1.2578	1.2538	1.2598	1.2678
2	1.2658	1.2598	1.2558	1.2698	1.2678	1.2658	1.2638	1.2698	1.2658	1.2718
3	1.2638	1.2518	1.2578	1.2658	1.2598	1.2558	1.2618	1.2578	1.2518	1.2618
4	1.2558	1.2538	1.2538	1.2598	1.2598	1.2638	1.2518	1.2518	1.2598	1.2538
5	1.2578	1.2598	1.2618	1.2558	1.2618	1.2538	1.2578	1.2558	1.2618	1.2518
6	1.2598	1.2538	1.2538	1.2658	1.2618	1.2558	1.2518	1.2638	1.2578	1.2198
7	1.2518	1.2518	1.2458	1.2638	1.2578	1.2438	1.2538	1.2578	1.2538	1.2518
8	1.2518	1.2598	1.2538	1.2538	1.2618	1.2458	1.2558	1.2538	1.2598	1.2598
9	1.2618	1.2538	1.2558	1.2618	1.2458	1.2538	1.2578	1.2538	1.2538	1.2578
10	1.2738	1.2678	1.2578	1.2598	1.2698	1.2578	1.2558	1.2638	1.2558	1.2618
11	1.2818	1.2678	1.2618	1.2718	1.2638	1.2558	1.2598	1.2658	1.2658	1.2638
12	1.2838	1.2678	1.2578	1.2598	1.2558	1.2618	1.2538	1.2638	1.2698	1.2578
13	1.2718	1.2618	1.2558	1.2098	1.2638	1.2518	1.2578	1.2578	1.2578	1.2558
14	1.2898	1.2618	1.2638	1.2718	1.2658	1.2618	1.2678	1.2678	1.2838	1.2698
15	1.2678	1.2598	1.2658	1.2778	1.2678	1.2638	1.2638	1.2178	1.2678	1.2558

After 100 Cycles

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	1.2640	1.2680	1.2600	1.2580	1.2580	1.2640	1.2580	1.2500	1.2540	1.2640
2	1.2640	1.2620	1.2580	1.2680	1.2580	1.2600	1.2620	1.2540	1.2640	1.2660
3	1.2620	1.2580	1.2540	1.2560	1.2520	1.2580	1.2580	1.2520	1.2540	1.2540
4	1.2620	1.2580	1.2500	1.2560	1.2540	1.2560	1.2520	1.2520	1.2580	1.2520
5	1.2640	1.2600	1.2560	1.2580	1.2600	1.2580	1.2540	1.2560	1.2580	1.2600
6	1.2600	1.2580	1.2620	1.2600	1.2580	1.2500	1.2600	1.2520	1.2540	1.2140
7	1.2600	1.2460	1.2400	1.2540	1.2520	1.2440	1.2480	1.2540	1.2520	1.2480
8	1.2500	1.2580	1.2520	1.2500	1.2520	1.2460	1.2520	1.2580	1.2560	1.2560
9	1.2520	1.2500	1.2500	1.2520	1.2480	1.2420	1.2440	1.2500	1.2520	1.2460
10	1.2520	1.2600	1.2560	1.2600	1.2620	1.2500	1.2640	1.2580	1.2500	1.2540
11	1.2580	1.2600	1.2580	1.2660	1.2620	1.2640	1.2620	1.2600	1.2600	1.2580
12	1.2580	1.2600	1.2560	1.2500	1.2560	1.2560	1.2540	1.2540	1.2600	1.2500
13	1.2520	1.2520	1.2540	1.2060	1.2520	1.2540	1.2560	1.2560	1.2620	1.2520
14	1.2620	1.2560	1.2640	1.2720	1.2660	1.2600	1.2660	1.2620	1.2720	1.2620
15	1.2580	1.2560	1.2580	1.2680	1.2620	1.2640	1.2580	1.2200	1.2660	1.2560

After Thermal

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	1.2680	1.2700	1.2620	1.2640	1.2640	1.2580	1.2740	1.2800	1.2760	1.2940
2	1.2680	1.2740	1.2580	1.2760	1.2520	1.2640	1.2700	1.2680	1.2720	1.2840
3	1.2740	1.2680	1.2640	1.2660	1.2600	1.2600	1.2600	1.2700	1.2680	1.2700
4	1.2700	1.2580	1.2580	1.2640	1.2620	1.2540	1.2600	1.2620	1.2760	1.2600
5	1.2600	1.2580	1.2680	1.2640	1.2600	1.2680	1.2600	1.2600	1.2660	1.2740
6	1.2640	1.2640	1.2600	1.2680	1.2580	1.2560	1.2700	1.2680	1.2680	1.2300
7	1.2560	1.2480	1.2480	1.2560	1.2520	1.2580	1.2540	1.2640	1.2600	1.2620
8	1.2520	1.2580	1.2460	1.2620	1.2660	1.2600	1.2580	1.2540	1.2640	1.2500
9	1.2460	1.2520	1.2560	1.2560	1.2600	1.2520	1.2420	1.2660	1.2580	1.2620

10	1.2580	1.2600	1.2600	1.2680	1.2500	1.2580	1.2600	1.2760	1.2580	1.2660
11	1.2640	1.2680	1.2580	1.2660	1.2560	1.2660	1.2660	1.2720	1.2620	1.2680
12	1.2720	1.2520	1.2560	1.2600	1.2580	1.2560	1.2640	1.2540	1.2720	1.2600
13	1.2580	1.2520	1.2640	1.2260	1.2560	1.2620	1.2580	1.2600	1.2640	1.2640
14	1.2640	1.2640	1.2760	1.2720	1.2720	1.2580	1.2720	1.2760	1.2720	1.2800
15	1.2580	1.2620	1.2700	1.2740	1.2760	1.2840	1.2620	1.2500	1.2680	1.2780

After Humidity

Units: mm

Pos.#	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**	**B9**	**B10**
1	1.2501	1.2481	1.2521	1.2561	1.2581	1.2561	1.2681	1.2541	1.2581	1.2561
2	1.2541	1.2541	1.2581	1.2581	1.2541	1.2601	1.2541	1.2121	1.2521	1.2581
3	1.2501	1.2461	1.2481	1.1981	1.2661	1.2621	1.2581	1.2581	1.2601	1.2461
4	1.2501	1.2481	1.2421	1.2441	1.2581	1.2501	1.2401	1.2421	1.2481	1.2421
5	1.2481	1.2541	1.2541	1.2581	1.2501	1.2521	1.2481	1.2481	1.2561	1.2481
6	1.2441	1.2521	1.2521	1.2521	1.2521	1.2601	1.2541	1.2481	1.2641	1.2461
7	1.2301	1.2341	1.2381	1.2481	1.2501	1.2581	1.2521	1.2481	1.2641	1.2441
8	1.2421	1.2461	1.2481	1.2501	1.2361	1.2481	1.2421	1.2421	1.2501	1.2461
9	1.2341	1.2301	1.2321	1.2401	1.2501	1.2441	1.2461	1.2481	1.2441	1.2461
10	1.2461	1.2381	1.2421	1.2521	1.2461	1.2421	1.2421	1.2481	1.2401	1.2141
11	1.2461	1.2521	1.2521	1.2501	1.2521	1.2501	1.2461	1.2441	1.2381	1.2481
12	1.2441	1.2421	1.2421	1.2421	1.2481	1.2561	1.2501	1.2481	1.2481	1.2461
13	1.2461	1.2461	1.2541	1.2441	1.2521	1.2521	1.2481	1.2341	1.2461	1.2501
14	1.2501	1.2461	1.2461	1.2581	1.2561	1.2461	1.2481	1.2481	1.2401	1.2521
15	1.2541	1.2561	1.2561	1.2541	1.2541	1.2601	1.2561	1.2561	1.2461	1.2641

FT5-30 Positions

Initial

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	1.2679	1.2679	1.2699	1.2699	1.2639	1.2799	1.2659	1.2739	1.2619	1.2699
2	1.2679	1.2659	1.2719	1.2679	1.2639	1.2739	1.2699	1.2659	1.2599	1.2639
3	1.2579	1.2619	1.2639	1.2599	1.2559	1.2659	1.2639	1.2659	1.2599	1.2019
4	1.2599	1.2599	1.2659	1.2559	1.2539	1.2679	1.2619	1.2559	1.2639	1.2599
5	1.2559	1.2659	1.2619	1.2619	1.2599	1.2619	1.2679	1.2619	1.2599	1.2599
6	1.2559	1.2539	1.2579	1.2579	1.2579	1.2639	1.2679	1.2599	1.2599	1.2619
7	1.2579	1.2559	1.2519	1.2599	1.2599	1.2599	1.2659	1.2539	1.2539	1.2559
8	1.2559	1.2559	1.2579	1.2659	1.2579	1.2599	1.2599	1.2579	1.2559	1.2579
9	1.2599	1.2619	1.2599	1.2579	1.2559	1.2599	1.2619	1.2559	1.2559	1.2639
10	1.2539	1.2599	1.2579	1.2599	1.2619	1.2639	1.2639	1.2539	1.2559	1.2619
11	1.2559	1.2599	1.2539	1.2619	1.2599	1.2599	1.2579	1.2599	1.2519	1.2599
12	1.2619	1.2579	1.2599	1.2579	1.2599	1.2579	1.2599	1.2559	1.2579	1.2619
13	1.2639	1.2539	1.2539	1.2579	1.2519	1.2599	1.2579	1.2559	1.2559	1.2599
14	1.2539	1.2559	1.2559	1.2559	1.2559	1.2559	1.2379	1.2559	1.2519	1.1779
15	1.2619	1.2599	1.2559	1.2599	1.2599	1.2519	1.2559	1.2619	1.2559	1.2639
16	1.2619	1.2559	1.2619	1.2579	1.2599	1.2539	1.2559	1.2519	1.2579	1.2619
17	1.2539	1.2619	1.2599	1.2559	1.2559	1.2579	1.2619	1.2579	1.2559	1.2619
18	1.2659	1.2559	1.2559	1.2599	1.2679	1.2679	1.2699	1.2579	1.2739	1.2679
19	1.2619	1.1939	1.2519	1.2659	1.1959	1.2619	1.2679	1.2619	1.2599	1.2599
20	1.2579	1.2719	1.2579	1.2639	1.2579	1.2619	1.2799	1.2639	1.2719	1.2619
21	1.2679	1.2679	1.2659	1.2679	1.2719	1.2639	1.2759	1.2639	1.2699	1.2699
22	1.2779	1.2639	1.2599	1.2699	1.2719	1.2659	1.2719	1.2619	1.2659	1.2719
23	1.2619	1.2619	1.2519	1.2619	1.2599	1.2619	1.2679	1.2599	1.2619	1.2639
24	1.2619	1.2659	1.2699	1.2599	1.2679	1.2679	1.2679	1.2639	1.2679	1.2639
25	1.2699	1.2699	1.2579	1.2659	1.2779	1.2799	1.2799	1.2699	1.2659	1.2699
26	1.2679	1.2639	1.2659	1.2719	1.2699	1.2719	1.2759	1.2679	1.2699	1.2759
27	1.2599	1.2679	1.2659	1.2619	1.2639	1.2679	1.2639	1.2599	1.2659	1.2679
28	1.2619	1.2599	1.2559	1.2599	1.2639	1.2679	1.2579	1.2599	1.2699	1.2679
29	1.2739	1.2739	1.2539	1.2759	1.2679	1.2799	1.2819	1.2699	1.2719	1.2719
30	1.2699	1.2699	1.2699	1.2739	1.2759	1.2799	1.2779	1.2679	1.2619	1.2799

After 100 Cycles

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	1.2740	1.2680	1.2640	1.2660	1.2640	1.2780	1.2680	1.2660	1.2600	1.2680
2	1.2660	1.2620	1.2660	1.2720	1.2620	1.2540	1.2720	1.2580	1.2660	1.2680
3	1.2580	1.2620	1.2600	1.2680	1.2600	1.2680	1.2660	1.2460	1.2620	1.1960
4	1.2580	1.2580	1.2580	1.2620	1.2640	1.2640	1.2640	1.2580	1.2580	1.2580
5	1.2640	1.2580	1.2640	1.2720	1.2640	1.2700	1.2660	1.2560	1.2600	1.2580
6	1.2560	1.2620	1.2620	1.2660	1.2560	1.2680	1.2600	1.2600	1.2620	1.2600
7	1.2500	1.2540	1.2540	1.2660	1.2580	1.2640	1.2600	1.2500	1.2520	1.2560
8	1.2660	1.2560	1.2580	1.2600	1.2580	1.2700	1.2580	1.2540	1.2500	1.2580
9	1.2580	1.2600	1.2560	1.2560	1.2600	1.2660	1.2620	1.2560	1.2520	1.2640
10	1.2520	1.2640	1.2620	1.2600	1.2580	1.2680	1.2620	1.2540	1.2540	1.2700
11	1.2540	1.2580	1.2580	1.2600	1.2580	1.2660	1.2580	1.2500	1.2520	1.2700
12	1.2500	1.2540	1.2600	1.2560	1.2540	1.2680	1.2620	1.2560	1.2520	1.2640

13	1.2620	1.2160	1.2580	1.2600	1.2600	1.2640	1.2640	1.2500	1.2580	1.2560
14	1.2520	1.2540	1.2560	1.2620	1.2480	1.2620	1.2360	1.2540	1.2500	1.1740
15	1.2560	1.2580	1.2620	1.2660	1.2600	1.2620	1.2500	1.2480	1.2560	1.2600
16	1.2560	1.2540	1.2600	1.2580	1.2560	1.2640	1.2560	1.2540	1.2580	1.2520
17	1.2560	1.2580	1.2500	1.2580	1.2520	1.2580	1.2580	1.2580	1.2560	1.2600
18	1.2560	1.2600	1.2600	1.2620	1.2660	1.2600	1.2680	1.2620	1.2700	1.2620
19	1.2600	1.2020	1.2580	1.2660	1.2080	1.2620	1.2680	1.2540	1.2660	1.2660
20	1.2540	1.2640	1.2620	1.2640	1.2640	1.2640	1.2680	1.2540	1.2640	1.2620
21	1.2680	1.2700	1.2640	1.2700	1.2640	1.2660	1.2680	1.2660	1.2680	1.2640
22	1.2680	1.2660	1.2680	1.2780	1.2620	1.2720	1.2700	1.2620	1.2780	1.2660
23	1.2640	1.2620	1.2580	1.2660	1.2620	1.2640	1.2680	1.2620	1.2640	1.2640
24	1.2640	1.2660	1.2080	1.2640	1.2640	1.2640	1.2700	1.2600	1.2680	1.2640
25	1.2680	1.2660	1.2680	1.2720	1.2700	1.2720	1.2760	1.2660	1.2760	1.2700
26	1.2680	1.2680	1.2660	1.2640	1.2060	1.2780	1.2680	1.2740	1.2640	1.2740
27	1.2580	1.2620	1.2580	1.2680	1.2640	1.2700	1.2640	1.2600	1.2580	1.2700
28	1.2560	1.2700	1.2660	1.2760	1.2620	1.2680	1.2620	1.2640	1.2660	1.2660
29	1.2820	1.2700	1.2700	1.2780	1.2640	1.2720	1.2820	1.2720	1.2720	1.2780
30	1.2760	1.2720	1.2700	1.2680	1.2660	1.2820	1.2760	1.2740	1.2600	1.2700

After Thermal

Units: mm

Pos.#	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**	**B9**	**B10**
1	1.2740	1.2760	1.2640	1.2660	1.2680	1.2800	1.2780	1.2780	1.2760	1.2640
2	1.2640	1.2680	1.2640	1.2680	1.2660	1.2760	1.2820	1.2700	1.2740	1.2740
3	1.2640	1.2640	1.2720	1.2680	1.2600	1.2820	1.2660	1.2640	1.2680	1.2060
4	1.2580	1.2600	1.2660	1.2660	1.2520	1.2740	1.2560	1.2540	1.2680	1.2600
5	1.2680	1.2640	1.2700	1.2640	1.2640	1.2660	1.2640	1.2660	1.2720	1.2580
6	1.2580	1.2720	1.2580	1.2720	1.2660	1.2680	1.2660	1.2540	1.2680	1.2620
7	1.2540	1.2520	1.2540	1.2680	1.2620	1.2620	1.2640	1.2600	1.2600	1.2520
8	1.2560	1.2620	1.2580	1.2540	1.2620	1.2620	1.2660	1.2540	1.2560	1.2540
9	1.2640	1.2680	1.2680	1.2540	1.2680	1.2680	1.2640	1.2580	1.2540	1.2660
10	1.2640	1.2620	1.2600	1.2660	1.2660	1.2640	1.2560	1.2540	1.2580	1.2700
11	1.2620	1.2580	1.2620	1.2680	1.2560	1.2660	1.2560	1.2620	1.2580	1.2540
12	1.2580	1.2660	1.2520	1.2680	1.2540	1.2620	1.2640	1.2640	1.2580	1.2660
13	1.2640	1.2560	1.2600	1.2640	1.2620	1.2640	1.2680	1.2540	1.2600	1.2580
14	1.2600	1.2560	1.2560	1.2660	1.2580	1.2680	1.2440	1.2620	1.2580	1.1880
15	1.2620	1.2560	1.2660	1.2600	1.2600	1.2680	1.2480	1.2620	1.2520	1.2560
16	1.2640	1.2560	1.2560	1.2600	1.2640	1.2600	1.2500	1.2500	1.2480	1.2600
17	1.2480	1.2620	1.2660	1.2560	1.2660	1.2580	1.2520	1.2580	1.2520	1.2780
18	1.2580	1.2700	1.2600	1.2640	1.2660	1.2640	1.2660	1.2540	1.2760	1.2620
19	1.2640	1.1940	1.2640	1.2660	1.2020	1.2600	1.2600	1.2700	1.2520	1.2660
20	1.2760	1.2640	1.2620	1.2660	1.2660	1.2620	1.2700	1.2700	1.2580	1.2580
21	1.2740	1.2720	1.2760	1.2640	1.2680	1.2680	1.2400	1.2700	1.2660	1.2700
22	1.2700	1.2660	1.2620	1.2660	1.2640	1.2680	1.2660	1.2600	1.2620	1.2660
23	1.2580	1.2640	1.2660	1.2640	1.2680	1.2580	1.2740	1.2640	1.2600	1.2740
24	1.2700	1.2740	1.2620	1.2640	1.2680	1.2680	1.2660	1.2660	1.2620	1.2540
25	1.2780	1.2740	1.2700	1.2580	1.2720	1.2600	1.2680	1.2760	1.2660	1.2780
26	1.2740	1.2740	1.2640	1.2680	1.2700	1.2840	1.2760	1.2720	1.2760	1.2780
27	1.2640	1.2640	1.2640	1.2660	1.2680	1.2700	1.2620	1.2560	1.2680	1.2680
28	1.2580	1.2680	1.2600	1.2580	1.2660	1.2640	1.2580	1.2580	1.2540	1.2640

29	1.2740	1.2760	1.2760	1.2700	1.2640	1.2740	1.2760	1.2720	1.2700	1.2780
30	1.2760	1.2820	1.2660	1.2780	1.2660	1.2840	1.2840	1.2720	1.2660	1.2760

After Humidity

Units: mm

Pos.#	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**	**B9**	**B10**
1	1.2681	1.2601	1.2601	1.2701	1.2621	1.2641	1.2661	1.2641	1.2501	1.2641
2	1.2661	1.2681	1.2661	1.2701	1.2601	1.2681	1.2761	1.2661	1.2601	1.2741
3	1.2561	1.2561	1.2521	1.2481	1.2541	1.2541	1.2501	1.2561	1.2621	1.2601
4	1.2581	1.2621	1.2581	1.2561	1.2581	1.2681	1.2541	1.2481	1.2641	1.2501
5	1.2581	1.2621	1.2621	1.2641	1.2581	1.2681	1.2661	1.2581	1.2581	1.2721
6	1.2641	1.2621	1.2541	1.2601	1.2621	1.2661	1.2621	1.2701	1.2561	1.2581
7	1.2661	1.2541	1.2521	1.2621	1.2561	1.2581	1.2681	1.2601	1.2621	1.2641
8	1.2541	1.2621	1.2421	1.2561	1.2541	1.2621	1.2621	1.2501	1.2601	1.2561
9	1.2581	1.2621	1.2621	1.2681	1.2521	1.2641	1.2581	1.2481	1.2561	1.2641
10	1.2601	1.2561	1.2681	1.2661	1.2641	1.2581	1.2541	1.2541	1.2521	1.2581
11	1.2601	1.1841	1.2581	1.2601	1.2601	1.2601	1.2541	1.2541	1.2601	1.2521
12	1.2461	1.2501	1.2581	1.2581	1.2001	1.2561	1.2541	1.2541	1.2501	1.2601
13	1.2541	1.2581	1.2441	1.2541	1.2601	1.2581	1.2621	1.2561	1.2681	1.2521
14	1.2501	1.2441	1.2481	1.2501	1.2521	1.2541	1.2481	1.2561	1.2541	1.2561
15	1.2481	1.2601	1.2441	1.2521	1.2541	1.2481	1.2541	1.2461	1.2421	1.2501
16	1.2541	1.2481	1.2461	1.2541	1.2501	1.2441	1.2421	1.2561	1.2541	1.2501
17	1.2401	1.2481	1.2441	1.2501	1.2521	1.2581	1.2321	1.2481	1.2421	1.1701
18	1.2521	1.2461	1.2481	1.2521	1.2501	1.2541	1.2561	1.2441	1.2521	1.2541
19	1.2441	1.2581	1.2421	1.2561	1.2601	1.2421	1.2561	1.2541	1.2521	1.2561
20	1.2461	1.2481	1.2421	1.2561	1.2461	1.2541	1.2461	1.2521	1.2481	1.2641
21	1.2501	1.2441	1.2381	1.2561	1.2541	1.2621	1.2601	1.2501	1.2501	1.2601
22	1.2501	1.2561	1.2521	1.2541	1.2481	1.2541	1.2561	1.2541	1.2421	1.2581
23	1.2521	1.2441	1.2441	1.2541	1.2561	1.2601	1.2541	1.2481	1.2481	1.2601
24	1.2441	1.2441	1.2381	1.2581	1.2541	1.2481	1.2541	1.2481	1.2441	1.2481
25	1.2461	1.2521	1.2481	1.2541	1.2481	1.2561	1.2621	1.2421	1.2541	1.2581
26	1.2501	1.2481	1.2481	1.2661	1.2561	1.2601	1.2601	1.2581	1.2541	1.2641
27	1.2501	1.2521	1.2461	1.2541	1.2561	1.2541	1.2601	1.2521	1.2581	1.2581
28	1.2461	1.2541	1.2561	1.2601	1.2541	1.2581	1.2581	1.2461	1.2521	1.1921
29	1.2541	1.2541	1.2541	1.2621	1.2521	1.2641	1.2781	1.2561	1.2521	1.2621
30	1.2621	1.2561	1.2581	1.2601	1.2681	1.2741	1.2641	1.2661	1.2601	1.2581

DATA Continued

MATING/UNMATING:
15 positions

Sample#	Initial		After 25 Cycles		After 50 Cycles		After 75 Cycles	
	Mating	Unmating	Mating	Unmating	Mating	Unmating	Mating	Unmating
1	1.63	0.67	1.51	0.69	1.57	0.74	1.53	0.69
2	1.94	0.97	1.87	1.09	1.90	1.17	1.96	1.28
3	1.93	0.73	1.85	0.94	1.95	1.16	2.04	1.28
4	1.88	0.70	1.70	0.70	1.69	0.72	1.70	0.70
5	1.75	0.65	1.64	0.70	1.70	0.77	1.87	0.80
6	1.81	0.70	1.73	0.75	1.78	0.85	1.85	0.89
7	1.77	0.68	1.72	0.72	1.81	0.80	1.93	0.81
8	1.80	0.73	1.70	0.81	1.74	0.87	1.86	0.90
9	1.94	0.88	1.88	0.92	1.90	1.01	2.00	1.11
10	1.65	0.62	1.59	0.75	1.70	0.90	1.88	0.96

Sample#	After 100 Cycles		After Thermals		After Humidity	
	Mating	Unmating	Mating	Unmating	Mating	Unmating
1	1.55	0.73	0.97	0.53	0.93	0.60
2	1.99	1.35	1.03	0.80	1.21	0.73
3	2.02	1.30	1.08	0.81	1.22	0.70
4	1.71	0.70	0.95	0.75	0.87	0.65
5	1.91	0.94	0.98	0.68	0.99	0.70
6	1.96	0.98	1.05	0.83	1.00	0.81
7	2.00	0.83	1.07	0.90	1.01	0.79
8	1.91	0.87	1.00	0.74	1.13	0.65
9	1.14	1.08	1.25	0.71	1.04	0.81
10	1.79	1.03	1.03	0.83	1.09	0.80

30 positions

Sample#	Initial		After 25 Cycles		After 50 Cycles		After 75 Cycles	
	Mating	Unmating	Mating	Unmating	Mating	Unmating	Mating	Unmating
1	3.42	1.66	3.62	2.22	3.84	2.51	4.04	2.61
2	4.32	2.09	4.49	2.47	4.53	2.65	4.60	2.78
3	3.62	1.70	4.24	2.36	4.66	2.70	4.89	2.88
4	4.11	1.88	4.46	2.55	4.75	2.89	5.03	2.97
5	3.82	1.60	4.01	2.55	4.18	1.90	4.57	2.07
6	3.55	1.55	3.94	2.31	4.02	2.55	4.62	2.78
7	3.90	1.88	4.10	2.11	4.33	2.34	4.98	2.58
8	4.11	2.00	4.24	2.40	4.52	2.87	4.75	2.91
9	3.62	1.73	3.98	2.28	4.34	2.43	4.67	2.99
10	4.30	2.10	4.33	2.34	4.57	2.30	4.91	2.68

Sample#	After 100 Cycles		After Thermals		After Humidity	
	Mating	Unmating	Mating	Unmating	Mating	Unmating
1	4.21	2.79	2.85	2.12	2.55	2.00
2	4.69	2.96	2.63	1.80	2.66	1.74
3	5.21	3.09	2.58	1.70	2.42	1.65
4	5.25	3.21	2.54	1.65	2.50	1.53
5	4.84	2.55	2.68	1.67	2.71	1.61
6	5.03	2.83	2.75	1.79	2.55	1.52
7	5.20	2.80	2.88	1.80	2.70	1.70
8	4.99	2.96	2.74	1.78	2.67	1.68
9	4.70	2.98	2.81	1.77	2.90	1.72
10	4.88	2.81	2.38	1.54	2.19	1.69

DATA Continued

NORMAL FORCE (FOR CONTACTS TESTED IN THE HOUSING):

Initial	Deflections in inches, Forces in Grams										
Sample #	**0.0006**	**0.0012**	**0.0018**	**0.0024**	**0.0030**	**0.0036**	**0.0042**	**0.0048**	**0.0054**	**0.0060**	***SET***
1	6.5	14.2	21.0	29.7	37.9	46.1	54.0	61.1	68.2	75.5	0.0008
2	7.6	15.6	24.0	31.8	39.6	47.6	56.0	63.2	69.8	76.7	0.0008
3	8.0	16.6	25.2	32.4	41.0	49.1	57.3	64.6	71.1	77.7	0.0009
4	8.6	17.4	26.2	34.6	42.4	50.5	58.9	66.3	73.0	79.7	0.0010
5	17.3	25.9	33.9	41.4	49.2	57.6	64.9	71.6	78.3	84.7	0.0005
6	8.0	16.6	25.0	32.8	41.0	49.0	56.6	64.1	70.9	77.4	0.0009
7	7.1	15.0	22.8	30.2	38.9	47.2	55.4	62.5	69.5	76.1	0.0009
8	8.5	16.4	24.6	32.4	40.8	48.8	55.9	63.2	70.4	77.2	0.0010

After Thermals	Deflections in inches, Forces in Grams										
Sample #	**0.0006**	**0.0012**	**0.0018**	**0.0024**	**0.0030**	**0.0036**	**0.0042**	**0.0048**	**0.0054**	**0.0060**	***SET***
1	8.2	17.0	24.9	33.7	42.4	50.8	58.7	67.5	76.2	82.9	0.0008
2	8.9	17.5	25.8	34.5	43.4	51.8	59.6	68.2	76.4	84.0	0.0008
3	8.8	17.5	25.4	34.1	43.2	51.7	60.2	69.2	78.6	86.3	0.0009
4	7.9	16.6	25.1	33.2	41.3	49.5	58.1	66.0	73.5	80.1	0.0009
5	8.4	17.4	26.2	35.0	44.4	52.9	61.0	69.6	78.0	85.6	0.0009
6	8.2	17.4	25.3	34.2	43.3	52.2	60.2	68.4	76.6	83.9	0.0008
7	8.5	16.5	25.3	34.7	42.9	51.8	60.5	69.2	77.7	85.8	0.0008
8	7.7	16.5	25.1	32.4	41.3	49.4	58.4	66.4	75.1	83.5	0.0008
9	9.0	17.8	26.7	36.1	45.1	53.2	61.7	70.6	78.9	86.3	0.0008

DATA Continued

INSULATION RESISTANCE (IR):

Initial Insulation Resistance
Measured In Meg Ohms

	Pin to Pin		
	Mated	A Unmated	B
	X	X	X
Sample#	FS5/FT5	FS5	FT5
094469-005	100000	100000	100000
094469-006	100000	100000	100000

Thermal Insulation Resistance
Measured In Meg Ohms

	Pin to Pin		
	Mated	A Unmated	B
	X	X	X
Sample#	FS5/FT5	FS5	FT5
094469-005	100000	100000	100000
094469-006	100000	100000	100000

Humidity Insulation Resistance
Measured In Meg Ohms

	Pin to Pin		
	Mated	A Unmated	B
	X	X	X
Sample#	FS5/FT5	FS5	FT5
094469-005	100000	100000	100000
094469-006	100000	100000	100000

DATA Continued

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

Initial DWV
Test Voltage= 540

	Pin to Pin		
	Mated	A Unmated B	
Sample#	FS5/FT5	FS5	FT5
094469-005	540	540	540
094469-006	540	540	540

Thermal Test Voltage
Test Voltage= 540

	Pin to Pin		
	Mated	A Unmated B	
Sample#	FS5/FT5	FS5	FT5
094469-005	540	540	540
094469-006	540	540	540

Humidity Test Voltage
Test Voltage= 540

	Pin to Pin		
	Mated	A Unmated B	
Sample#	FS5/FT5	FS5	FT5
094469-005	540	540	540
094469-006	540	540	540

DATA Continued

LLCR:

Static Mate (Group A)

	mOhm values	Actual	Delta	Delta	Delta
Board	Position	Initial	25 Cycles	Thermal	Humidity
1	P1	20.7	1.0	2.6	0.6
1	P2	20.5	0.8	6.3	0.7
1	P3	20.5	1.7	5.5	1.4
1	P4	20.2	1.5	2.7	2.1
1	P6	20.9	-0.2	1.1	0.1
1	P7	21.2	-0.7	0.3	0.0
1	P8	20.9	-0.2	0.5	0.1
1	P9	20.7	0.1	1.2	0.3
1	P10	21.2	-0.5	0.2	0.0
1	P11	21.0	-0.6	-0.1	-0.2
1	P12	21.3	-0.7	0.8	0.7
1	P13	20.7	0.0	0.3	0.2
1	P14	21.0	-0.3	0.1	-0.1
1	P15	20.7	-0.2	0.2	-0.2
1	P16	20.7	-0.1	0.0	-0.2
1	P17	20.7	0.2	0.1	-0.2
1	P18	20.7	0.1	0.2	0.0
1	P19	20.5	0.4	0.2	-0.1
1	P20	20.3	0.1	0.1	-0.2
1	P21	20.1	1.2	1.8	1.5
1	P22	20.2	1.4	2.2	1.4
1	P23	20.3	1.4	2.9	0.8
1	P24	20.5	0.6	2.2	1.1
2	P1	20.9	1.0	12.0	1.3
2	P2	20.6	1.2	8.2	2.1
2	P3	21.0	-0.4	5.8	0.2
2	P4	19.9	1.5	4.8	1.1
2	P6	20.7	-0.6	0.6	-0.4
2	P7	20.4	-0.6	0.4	-0.2
2	P8	20.8	-0.7	-0.2	-0.4
2	P9	20.3	-0.3	0.5	0.1
2	P10	20.9	-1.0	-0.3	-0.4
2	P11	20.4	-0.5	0.1	-0.1
2	P12	21.4	-1.3	-0.6	-0.9
2	P13	20.8	-0.7	-0.4	-0.3
2	P14	20.3	-0.3	0.5	0.4
2	P15	20.5	-0.5	0.5	0.0
2	P16	20.8	-0.7	-0.1	-0.4
2	P17	20.5	-0.5	0.3	0.1
2	P18	20.8	-0.2	0.2	-0.2
2	P19	20.8	-1.1	-0.7	-0.8
2	P20	20.1	-0.2	-0.2	-0.2
2	P21	20.0	0.7	1.6	0.9

2	P22	20.2	0.9	2.4	1.9
2	P23	20.4	1.0	4.8	1.4
2	P24	20.7	0.4	5.9	0.3
3	P1	20.4	2.5	4.0	1.6
3	P2	20.0	0.5	3.2	0.3
3	P3	20.2	0.2	3.3	-0.3
3	P4	20.7	0.4	1.1	0.4
3	P6	19.7	0.2	1.1	0.1
3	P7	19.8	0.2	1.1	0.1
3	P8	20.4	-0.4	-0.1	-0.5
3	P9	20.2	-0.2	0.5	0.1
3	P10	19.9	0.6	0.7	0.3
3	P11	20.0	0.4	1.2	0.1
3	P12	20.7	-0.2	0.3	-0.3
3	P13	20.4	-0.2	0.3	-0.2
3	P14	20.1	-0.3	0.1	-0.1
3	P15	20.1	-0.2	1.0	0.5
3	P16	20.0	0.1	0.4	0.3
3	P17	20.5	0.0	0.5	-0.1
3	P18	19.8	0.6	0.4	0.2
3	P19	20.0	0.0	0.7	0.1
3	P20	19.4	0.6	1.4	0.8
3	P21	20.2	0.5	1.3	0.7
3	P22	19.7	1.4	5.4	1.0
3	P23	19.4	1.9	3.0	1.7
3	P24	20.5	1.2	4.0	0.6
4	P1	20.7	-0.4	-0.2	-0.8
4	P2	20.2	-0.4	0.4	-0.2
4	P3	20.2	-0.7	0.1	-0.5
4	P4	20.1	-0.6	0.0	-0.5
4	P6	20.1	-0.7	-0.5	-0.7
4	P7	20.4	-1.3	-1.1	-1.2
4	P8	21.1	-1.0	-0.9	-1.5
4	P9	21.4	-1.6	-1.2	-1.6
4	P10	20.5	-0.2	0.0	-0.3
4	P11	20.6	-0.7	-0.7	-1.1
4	P12	20.6	-1.0	-0.4	-0.5
4	P13	20.3	-0.8	-0.7	-0.8
4	P14	21.3	-1.9	-1.6	-1.7
4	P15	21.0	-1.4	-1.1	-1.4
4	P16	21.1	-1.5	-1.4	-1.6
4	P17	20.4	-0.8	-0.8	-1.1
4	P18	20.5	-0.7	-1.1	-1.1
4	P19	20.0	-0.4	-0.5	-0.6
4	P20	19.4	0.1	0.1	0.0
4	P21	19.8	-0.3	0.1	-0.2
4	P22	19.9	-0.2	0.1	-0.2
4	P23	20.2	-0.4	0.2	-0.5
4	P24	20.3	-0.4	-0.3	-0.5

5	P1	20.3	-0.6	0.3	-0.5
5	P2	20.7	-0.9	0.2	-0.7
5	P3	20.6	-0.9	-0.6	-0.9
5	P4	20.5	-1.1	-0.6	-1.0
5	P6	20.0	-0.5	-0.3	-0.7
5	P7	20.4	-1.1	-1.0	-1.2
5	P8	20.5	-0.9	-0.8	-1.1
5	P9	21.0	-1.4	-1.4	-1.5
5	P10	20.5	-1.0	-0.9	-1.1
5	P11	21.3	-1.7	-1.6	-1.8
5	P12	20.9	-1.1	-1.1	-1.3
5	P13	20.6	-1.1	-1.0	-1.3
5	P14	21.5	-1.5	-1.9	-2.3
5	P15	20.9	-1.2	-1.2	-1.5
5	P16	20.2	-0.8	-0.2	-0.4
5	P17	21.5	-2.3	-1.9	-2.1
5	P18	20.3	-0.8	-0.7	-0.9
5	P19	20.0	-0.3	-0.4	-0.6
5	P20	19.8	-0.5	-0.2	-0.3
5	P21	19.7	-0.4	-0.1	-0.5
5	P22	19.9	-0.6	-0.1	-0.3
5	P23	19.9	-0.7	0.4	-0.2
5	P24	20.2	-0.8	-0.6	-0.9
6	P1	20.0	-0.4	0.1	-0.2
6	P2	20.2	-0.5	0.7	-0.3
6	P3	20.6	-0.7	0.0	-0.6
6	P4	20.2	-0.5	0.9	-0.5
6	P6	20.0	-0.7	0.2	0.0
6	P7	20.7	-1.2	-0.9	-1.0
6	P8	21.1	-1.7	-1.0	-1.1
6	P9	20.4	-1.0	-0.9	-1.0
6	P10	21.1	-1.3	-1.3	-1.5
6	P11	21.2	-1.6	-1.7	-2.0
6	P12	21.3	-1.8	-1.6	-1.8
6	P13	21.0	-1.7	-1.5	-1.7
6	P14	21.0	-1.5	-1.5	-1.7
6	P15	20.7	-1.0	-1.1	-1.2
6	P16	21.3	-1.5	-1.4	-1.3
6	P17	20.7	-0.9	-0.9	-1.0
6	P18	20.8	-0.8	-1.0	-1.1
6	P19	20.4	-0.7	-0.7	-0.8
6	P20	20.0	-0.8	-0.5	-0.6
6	P21	20.0	-0.6	-0.1	-0.7
6	P22	20.3	0.2	1.7	0.0
6	P23	20.5	-0.6	0.4	-0.8
6	P24	20.4	-0.9	-0.3	-0.8
7	P1	20.5	3.0	5.0	1.6
7	P2	20.7	2.1	4.9	1.6
7	P3	20.7	1.3	2.4	1.2

7	P4	20.2	2.1	1.6	1.8
7	P6	20.7	-0.4	0.3	-0.3
7	P7	20.6	-0.4	-0.1	-0.4
7	P8	20.9	-0.1	0.3	-0.3
7	P9	20.7	0.0	0.6	-0.1
7	P10	21.2	-0.6	-0.6	-0.8
7	P11	20.6	-0.1	0.2	0.0
7	P12	21.4	-0.4	0.1	-0.3
7	P13	21.3	-0.6	0.1	-0.2
7	P14	21.2	-1.0	-0.6	-0.7
7	P15	21.1	-0.7	-0.2	-0.4
7	P16	21.1	-0.6	-0.3	-0.4
7	P17	20.9	-0.3	-0.1	-0.3
7	P18	20.6	-0.2	0.3	-0.2
7	P19	20.2	0.1	0.7	0.3
7	P20	20.1	0.1	0.4	0.0
7	P21	20.4	2.1	5.3	2.0
7	P22	19.9	2.4	5.3	1.6
7	P23	20.1	2.0	3.1	0.8
7	P24	20.3	2.4	5.0	1.8
8	P1	20.6	1.3	5.6	0.7
8	P2	20.8	1.1	7.9	1.2
8	P3	20.4	1.5	14.2	1.3
8	P4	20.7	0.0	7.5	0.6
8	P6	19.8	0.8	1.8	1.0
8	P7	21.1	-0.2	3.1	1.5
8	P8	20.9	0.0	0.5	0.3
8	P9	20.4	0.3	3.6	1.0
8	P10	20.7	0.3	0.7	0.3
8	P11	20.5	0.4	1.6	0.8
8	P12	20.6	0.4	0.5	0.2
8	P13	21.0	-0.3	0.2	-0.1
8	P14	20.5	0.0	0.4	0.3
8	P15	21.1	-0.9	-0.1	-0.4
8	P16	20.0	0.0	0.3	0.3
8	P17	20.7	-0.3	0.4	-0.1
8	P18	20.6	-0.1	-0.1	-0.3
8	P19	20.0	0.1	0.5	0.3
8	P20	20.2	-0.2	0.2	-0.1
8	P21	20.0	1.1	7.1	1.5
8	P22	20.3	2.3	7.0	2.2
8	P23	20.1	1.6	6.2	2.2
8	P24	19.7	1.4	5.1	1.2

Assemblies mated static then shifted 0.5mm X and Y 25 cycles (Group B)

	mOhm values	Actual	Delta	Delta	Delta
Board	Position	Initial	25 Cycles	Thermal	Humidity
1	P1	21.7	0.2	2.0	-0.1
1	P2	20.9	0.6	1.4	0.1
1	P3	20.4	0.5	1.4	0.2
1	P4	20.8	0.4	0.8	0.1
1	P6	19.8	0.2	0.1	0.0
1	P7	19.6	0.6	0.3	0.2
1	P8	20.0	0.4	0.4	0.3
1	P9	20.2	0.4	0.3	-0.1
1	P10	19.6	0.2	0.3	0.2
1	P11	19.7	0.3	0.1	-0.1
1	P12	20.0	0.8	0.4	0.1
1	P13	19.6	0.3	0.4	0.4
1	P14	19.4	0.2	0.3	0.2
1	P15	19.3	0.3	0.4	0.3
1	P16	19.7	0.1	0.3	0.2
1	P17	19.7	0.5	0.3	0.3
1	P18	19.6	0.4	0.1	0.0
1	P19	19.7	0.2	0.1	0.0
1	P20	19.9	-0.5	-0.5	-0.7
1	P21	20.5	0.0	0.8	0.2
1	P22	21.1	-0.7	0.5	-0.6
1	P23	21.9	-1.0	-0.4	-1.6
1	P24	23.3	-1.9	-1.2	-2.3
2	P1	21.3	0.1	2.7	0.7
2	P2	21.3	0.8	1.0	0.1
2	P3	21.2	-0.3	1.1	0.0
2	P4	20.8	0.1	0.6	0.3
2	P6	20.7	-0.5	0.0	-0.2
2	P7	20.5	-0.2	0.0	-0.2
2	P8	20.3	-0.1	0.1	0.0
2	P9	20.4	-0.5	-0.4	-0.4
2	P10	20.3	-0.2	-0.1	-0.1
2	P11	20.3	-0.4	-0.1	-0.1
2	P12	20.2	0.0	-0.1	-0.1
2	P13	20.2	-0.3	-0.4	-0.4
2	P14	20.0	0.2	0.2	0.2
2	P15	20.0	-0.2	-0.1	-0.1
2	P16	20.0	0.2	0.4	0.3
2	P17	20.3	0.1	0.0	-0.1
2	P18	20.2	-0.4	-0.3	-0.4
2	P19	19.8	-0.1	-0.1	-0.1
2	P20	19.5	-0.1	-0.2	-0.2
2	P21	21.1	-0.7	-0.8	-0.9
2	P22	21.5	-0.4	1.0	-0.3
2	P23	21.6	-0.5	-0.4	-1.0
2	P24	22.6	-0.9	-0.4	-1.2

3	P1	23.2	0.4	3.3	-1.0
3	P2	22.4	-1.6	-0.2	-2.0
3	P3	22.1	-0.3	1.8	-0.6
3	P4	21.3	-0.6	-0.1	-0.7
3	P6	20.1	-0.9	-0.8	-0.9
3	P7	19.8	-0.2	-0.3	-0.4
3	P8	19.8	-0.2	-0.3	-0.4
3	P9	20.1	-0.1	-0.3	-0.4
3	P10	19.7	0.0	-0.1	0.0
3	P11	20.0	-0.1	-0.2	-0.3
3	P12	19.9	-0.3	-0.4	-0.3
3	P13	19.7	-0.2	-0.3	-0.1
3	P14	19.5	0.1	0.0	0.0
3	P15	19.5	-0.1	-0.3	-0.3
3	P16	19.7	-0.2	-0.3	-0.3
3	P17	20.1	-0.1	-0.2	-0.4
3	P18	19.8	-0.3	-0.4	-0.4
3	P19	19.7	-0.3	-0.4	-0.5
3	P20	19.4	-0.4	-0.5	-0.5
3	P21	21.3	-1.1	-1.3	-1.4
3	P22	20.8	0.0	2.3	1.3
3	P23	24.3	-2.1	-1.9	-2.3
3	P24	21.0	1.7	4.7	2.4
4	P1	23.0	0.0	2.9	-0.6
4	P2	22.7	-0.9	0.8	-1.6
4	P3	22.6	-0.9	0.5	-0.7
4	P4	20.6	0.2	1.6	0.0
4	P6	19.7	-0.1	0.2	0.0
4	P7	20.2	-0.2	-0.2	-0.3
4	P8	20.3	-0.4	-0.4	-0.4
4	P9	19.9	0.1	0.1	-0.1
4	P10	20.2	0.0	-0.1	-0.2
4	P11	19.6	0.5	0.7	0.4
4	P12	19.7	0.4	0.3	0.2
4	P13	19.7	0.2	0.0	-0.1
4	P14	19.9	0.2	0.1	0.1
4	P15	19.5	0.3	0.3	0.2
4	P16	20.0	-0.1	0.1	0.1
4	P17	20.0	0.1	0.2	0.0
4	P18	20.2	-0.1	-0.2	-0.3
4	P19	19.9	-0.2	-0.2	-0.3
4	P20	19.3	-0.1	-0.2	-0.2
4	P21	20.3	0.2	0.6	0.4
4	P22	20.9	-0.4	0.2	0.0
4	P23	20.6	0.0	0.6	-0.2
4	P24	21.2	0.8	1.3	0.2
5	P1	24.1	-0.4	9.5	5.7
5	P2	22.8	1.0	7.6	1.7
5	P3	21.1	0.2	1.3	-0.2

5	P4	20.9	-0.1	0.6	-0.3
5	P6	19.3	0.9	1.3	1.1
5	P7	19.8	-0.1	0.3	0.3
5	P8	19.2	0.5	0.8	0.6
5	P9	19.4	0.4	0.7	0.8
5	P10	19.3	0.2	0.6	0.5
5	P11	21.0	-1.3	-0.2	-0.8
5	P12	19.7	-0.1	0.6	0.7
5	P13	19.2	0.1	0.6	0.7
5	P14	19.1	0.3	0.8	0.9
5	P15	19.8	-0.3	0.4	0.1
5	P16	19.4	0.0	0.4	0.3
5	P17	19.8	-0.2	-0.1	-0.2
5	P18	19.5	-0.2	0.4	0.1
5	P19	19.4	0.3	0.6	0.4
5	P20	19.3	0.2	0.2	0.0
5	P21	20.6	0.0	0.6	0.0
5	P22	22.6	0.0	0.1	0.6
5	P23	23.2	0.2	1.4	1.5
5	P24	22.7	2.7	7.1	1.7
7	P1	25.6	-1.3	2.6	-3.7
7	P2	25.3	-2.5	1.9	-3.3
7	P3	23.2	-1.2	1.6	-1.8
7	P4	21.2	0.3	1.6	0.9
7	P6	20.8	-0.9	-0.9	-0.7
7	P7	20.7	-0.8	-0.7	-0.6
7	P8	20.9	-0.8	-0.8	-0.8
7	P9	20.3	-0.1	-0.3	-0.1
7	P10	20.6	-0.6	-0.6	-0.1
7	P11	20.9	-0.5	-0.6	-0.6
7	P12	21.1	-1.2	-1.3	-1.2
7	P13	20.8	-0.7	-0.8	-0.5
7	P14	20.7	-0.3	-0.4	-0.1
7	P15	20.8	-0.8	-1.0	-1.0
7	P16	20.9	-1.0	-1.1	-1.0
7	P17	20.8	-0.8	-0.8	-0.8
7	P18	20.4	-0.4	-0.6	-0.6
7	P19	20.7	-0.8	-0.9	-0.9
7	P20	21.8	-0.9	-1.1	-1.0
7	P21	20.7	-0.4	-0.2	-0.6
7	P22	22.3	-0.8	-0.1	-1.5
7	P23	23.4	-2.0	-1.9	-2.6
7	P24	23.6	-1.5	-0.3	-2.3
8	P1	21.2	0.8	2.0	-0.3
8	P2	21.0	0.3	1.5	-0.3
8	P3	20.8	-0.9	0.1	-0.8
8	P4	20.9	-0.4	0.5	-0.3
8	P6	20.0	-0.1	-0.2	-0.3
8	P7	20.0	-0.1	-0.1	-0.3

8	P8	20.3	-0.7	-0.6	-0.6
8	P9	20.0	-0.1	-0.3	-0.4
8	P10	20.3	-0.1	-0.3	-0.4
8	P11	20.2	-0.2	-0.3	-0.4
8	P12	20.1	-0.2	-0.3	-0.3
8	P13	20.2	-0.3	-0.4	-0.4
8	P14	19.9	0.0	-0.1	-0.1
8	P15	19.6	0.0	0.0	0.1
8	P16	19.9	0.4	0.2	0.1
8	P17	19.7	-0.1	-0.1	-0.1
8	P18	19.5	0.0	-0.2	-0.1
8	P19	19.7	-0.1	0.0	-0.1
8	P20	20.2	-1.0	-1.0	-1.0
8	P21	20.0	0.5	0.9	0.5
8	P22	21.9	-0.3	-0.4	-1.2
8	P23	21.2	0.4	2.2	0.2
8	P24	21.0	1.0	2.3	1.3

DATA Continued

GAS TIGHT:

Board	mOhm values Position	Actual Initial	Delta Gas Tight
1	P1	22.6	0.5
1	P2	23.9	0.0
1	P3	21.7	0.0
1	P4	20.6	0.1
1	P6	21.0	-0.1
1	P7	21.0	-0.1
1	P8	22.1	0.1
1	P9	20.9	0.0
1	P10	21.5	-0.2
1	P11	20.8	-0.1
1	P12	20.9	0.0
1	P13	21.2	0.0
1	P14	20.9	-0.1
1	P15	20.8	0.0
1	P16	20.7	0.0
1	P17	21.1	0.0
1	P18	21.2	0.0
1	P19	20.7	0.0
1	P20	20.6	0.0
1	P21	20.9	0.1
1	P22	22.3	0.2
1	P23	22.6	0.4
1	P24	23.6	0.0
2	P1	22.3	-0.2
2	P2	21.0	0.0
2	P3	22.0	0.0
2	P4	20.6	-0.3
2	P6	20.3	0.0
2	P7	20.2	0.0
2	P8	20.3	0.0
2	P9	20.3	0.0
2	P10	20.5	0.0
2	P11	20.3	0.0
2	P12	19.8	0.0
2	P13	19.8	0.1
2	P14	19.9	0.0
2	P15	20.0	0.0
2	P16	19.9	0.1
2	P17	20.3	0.0
2	P18	19.9	0.1
2	P19	20.2	0.1
2	P20	20.4	0.1
2	P21	20.7	0.0

2	P22	21.8	0.0
2	P23	21.4	-0.2
2	P24	24.9	1.9
3	P1	21.9	0.8
3	P2	21.5	0.0
3	P3	20.6	0.1
3	P4	20.4	0.2
3	P6	20.4	0.0
3	P7	20.0	0.0
3	P8	20.1	0.1
3	P9	20.0	0.0
3	P10	19.6	0.1
3	P11	19.9	0.1
3	P12	19.9	0.0
3	P13	19.8	0.0
3	P14	20.1	0.1
3	P15	20.1	0.0
3	P16	20.0	0.0
3	P17	20.3	0.0
3	P18	20.0	0.0
3	P19	20.1	0.1
3	P20	19.8	0.1
3	P21	20.6	0.0
3	P22	21.4	0.1
3	P23	20.8	0.3
3	P24	22.0	1.1
4	P1	22.8	0.4
4	P2	25.6	0.0
4	P3	22.9	0.2
4	P4	20.4	0.4
4	P6	19.9	0.0
4	P7	19.8	0.1
4	P8	20.2	0.0
4	P9	20.0	-0.1
4	P10	20.3	0.0
4	P11	20.0	0.0
4	P12	20.1	0.1
4	P13	20.4	0.1
4	P14	19.7	0.1
4	P15	20.1	0.2
4	P16	20.2	0.1
4	P17	20.5	0.0
4	P18	20.4	0.1
4	P19	20.2	0.1
4	P20	20.0	0.0
4	P21	20.5	0.0
4	P22	21.0	0.0
4	P23	22.3	0.0
4	P24	22.1	0.4

5	P1	21.4	1.4
5	P2	22.7	-0.1
5	P3	21.7	0.2
5	P4	21.6	1.5
5	P6	19.7	0.1
5	P7	20.0	0.1
5	P8	20.0	0.1
5	P9	20.0	-0.1
5	P10	19.7	0.0
5	P11	20.3	-0.1
5	P12	20.3	-0.1
5	P13	20.3	-0.3
5	P14	19.5	-0.1
5	P15	19.8	0.1
5	P16	19.7	0.1
5	P17	19.7	0.0
5	P18	20.0	0.0
5	P19	19.9	0.1
5	P20	19.7	0.0
5	P21	20.5	0.1
5	P22	20.5	-0.1
5	P23	20.5	0.3
5	P24	22.1	0.2
6	P1	23.0	-0.2
6	P2	21.4	0.0
6	P3	22.2	0.1
6	P4	20.3	0.2
6	P6	19.9	0.1
6	P7	19.8	0.0
6	P8	20.1	0.0
6	P9	20.0	-0.1
6	P10	19.5	0.1
6	P11	19.9	-0.1
6	P12	19.7	0.0
6	P13	19.6	0.0
6	P14	19.9	-0.1
6	P15	19.8	0.0
6	P16	19.4	0.0
6	P17	20.2	0.1
6	P18	20.1	0.1
6	P19	20.1	0.0
6	P20	19.8	0.0
6	P21	20.2	-0.1
6	P22	21.1	-0.1
6	P23	21.4	0.0
6	P24	21.4	-0.4
7	P1	21.4	0.0
7	P2	21.8	0.0
7	P3	20.6	-0.1

7	P4	20.8	0.1
7	P6	19.6	0.1
7	P7	19.6	0.1
7	P8	20.4	0.0
7	P9	19.9	0.1
7	P10	19.9	0.1
7	P11	19.9	0.1
7	P12	19.8	0.1
7	P13	19.2	0.1
7	P14	19.7	0.1
7	P15	19.9	0.1
7	P16	19.5	0.1
7	P17	20.3	0.1
7	P18	19.6	0.1
7	P19	20.0	0.1
7	P20	19.7	0.1
7	P21	20.5	0.0
7	P22	21.1	0.1
7	P23	21.8	0.4
7	P24	21.2	0.0
8	P1	22.3	-0.2
8	P2	22.5	0.0
8	P3	21.6	0.2
8	P4	20.5	0.2
8	P6	19.6	0.1
8	P7	19.6	0.1
8	P8	19.8	0.0
8	P9	20.1	-0.2
8	P10	20.2	0.1
8	P11	20.0	0.1
8	P12	19.8	0.0
8	P13	19.5	0.1
8	P14	20.0	0.0
8	P15	20.0	0.0
8	P16	19.6	0.1
8	P17	19.9	0.1
8	P18	19.5	0.1
8	P19	19.9	0.1
8	P20	19.5	0.0
8	P21	20.1	0.0
8	P22	21.1	0.1
8	P23	22.0	0.1
8	P24	21.2	0.3

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: MO-04
Description: Multimeter /Data Acquisition System
Manufacturer: Keithley
Model: 2700
Serial #: 0798688
Accuracy: See Manual
… Last Cal: 04/30/2010, Next Cal: 04/30/2011

Equipment #: PS-07
Description: 20 V, 120 A DC Power Supply - AutoRanging SO/HPIB
Manufacturer: Hewlett Packard / Agilent
Model: AT-6031A
Serial #: 2721A00648
Accuracy: See Manual Current Carrying Capacity (CCC) Chamber
… Last Cal: 06/16/2009, Next Cal: 06/16/2010

Equipment #: MO-01
Description: Micro-Ohmeter
Manufacturer: Keithley
Model: 580
Serial #: 0772740
Accuracy: See Manual
… Last Cal: 04/30/2010, Next Cal: 04/30/2011

Equipment #: MV-05
Description: 6" x 6" Video Measuring Machine
Manufacturer: Micro-Vu
Model: M3010838
Serial #: V9344
Accuracy: See Manual
… Last Cal: 01/12/2010, Next Cal: 01/12/2011

Equipment #: TCT-04
Description: Dillon Quantrol TC21 25-1000 mm/min series test stand
Manufacturer: Dillon Quantrol
Model: TC2 I series test stand
Serial #: 04-1041-04
Accuracy: Speed Accuracy: +/- 5% of indicated speed; Speed Accuracy: +/- 5% of indicated speed;
… Last Cal: 05/07/2009, Next Cal: 05/07/2010

Equipment #: HPM-01
Description: Hipot Megommeter
Manufacturer: Hipotronics
Model: H306B-A
Serial #: M9905004
Accuracy: 2 % Full Scale Accuracy
… Last Cal: 11/30/2009, Next Cal: 11/30/2010

Equipment #: THC-01
Description: Temperature/Humidity Chamber
Manufacturer: Thermotron
Model: SM-8-7800
Serial #: 30676
Accuracy: See Manual See Manual
… Last Cal: 02/16/2010, Next Cal: 08/16/2010

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: 06/16/2010, Next Cal: 06/16/2011