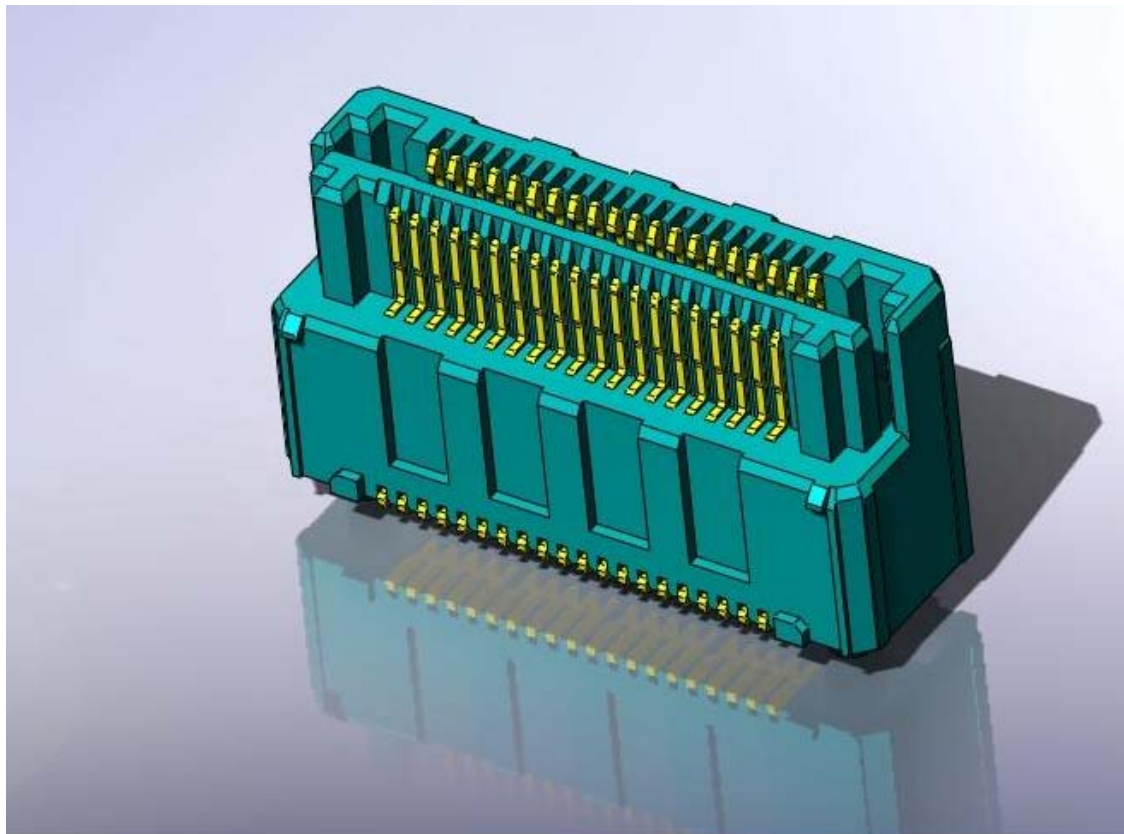




Project Number: Design Qualification Test Report		Tracking Code:TC0923--2523_Report_Rev_2	
Requested by: Steven Xu		Date: 3/14/2012	Product Rev: 0
Part #: LSHM-50-06.0-L-DV-A-N		Lot #: 01	Tech: Kason He Sally Wang
Part description: LSHM			Qty to test: 120
Test Start: 6/9/2009	Test Completed: 7/3/2009		



DESIGN QUALIFICATION TEST REPORT

LSHM

LSHM-50-06.0-L-DV-A-N

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

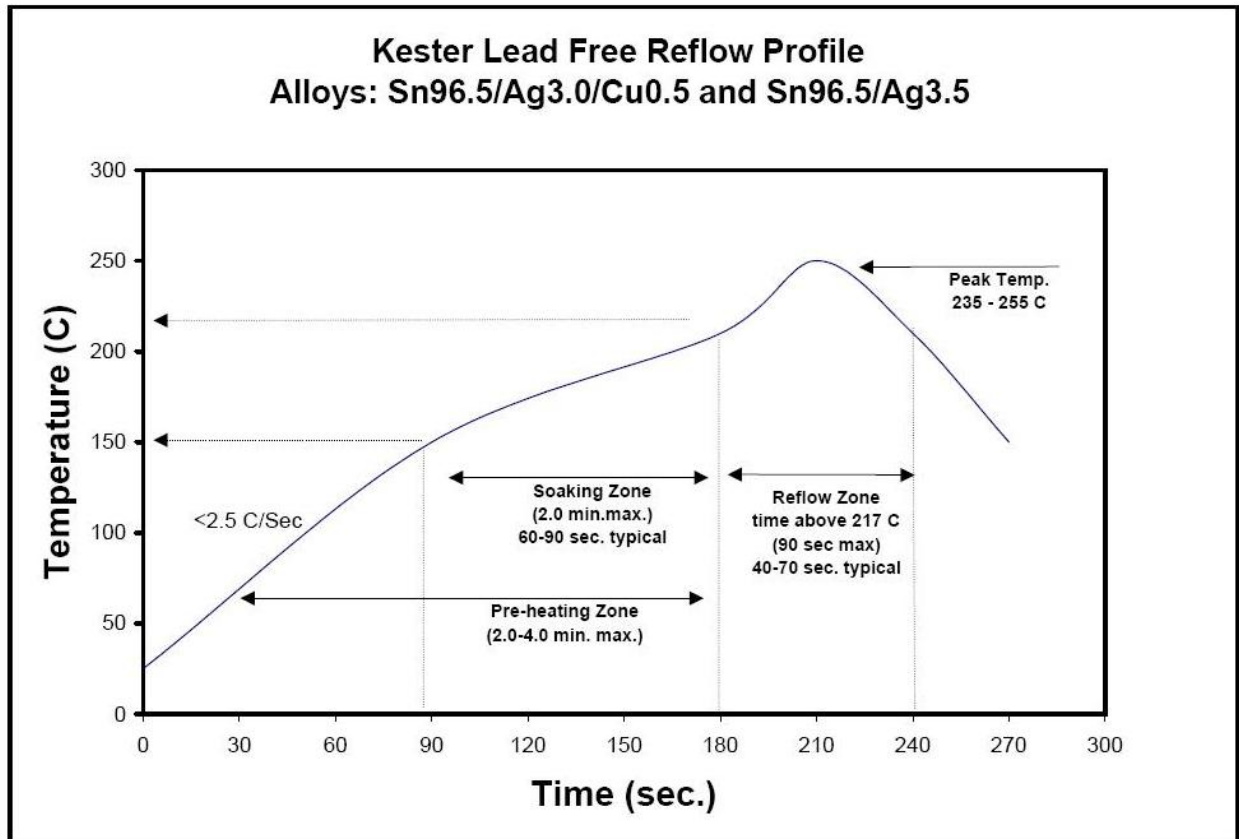
To perform the following tests: Design qualification test. Please see test plan.

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-101868-TST

TYPICAL OVEN PROFILE (Soldering Parts to Test Boards)

FLOWCHARTS**Gas Tight**

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

Mating/Unmating/Gaps/Normal Force/Deflection Force

TEST STEP	GROUP A 10 Boards	GROUP B1 Individual Contacts (30) min	GROUP B2 Individual Contacts (30) min
01	Contact Gaps	Setup Approve	Setup Approve
02	Mating / Unmating	Normal Force	Thermal Aging (Mated)
03	Data Review	Data Review	Normal Force
04	100 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

(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 A2 2 Unmated of Part # Being Tested Break Down - Pin to Pin	GROUP A3 2 Unmated of Mating Part# Break Down - Pin to Pin	GROUP B 2 Mated Sets Pin to Pin
01	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)
02				Thermal Aging (both sets unmated)
03				IR & DWV at test voltage (on both mated sets and on each connector unmated)
04				Cyclic Humidity (both sets unmated)
05				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 200 Points 100 Cycles
01	LLCR-1
02	Data Review
03	100 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

Current Carrying Capacity**DOUBLE ROW****Current Carrying Capacity**

3 Mated Assemblies Each

TEST STEP	GROUP A 3 Mated Assemblies 2 CONTACT POWERED	GROUP B 3 Mated Assemblies 4 CONTACTS POWERED	GROUP C 3 Mated Assemblies 6 CONTACTS POWERED	GROUP D 3 Mated Assemblies 8 CONTACTS POWERED	GROUP E 3 Mated Assemblies ALL CONTACTS POWERED
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° 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 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.

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes.

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 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.

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes.

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. $\leq +5.0$ 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

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes.

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 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° 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-----2.0A per contact with 2 adjacent contacts powered
- CCC for a 30°C Temperature Rise-----1.5A per contact with 4 adjacent contacts powered
- CCC for a 30°C Temperature Rise-----1.3A per contact with 6 adjacent contacts powered
- CCC for a 30°C Temperature Rise-----1.1A per contact with 8 adjacent contacts powered
- CCC for a 30°C Temperature Rise-----0.4A per contact with all adjacent contacts powered

Contact Gaps**Male**

- **Initial**
 - **Min**-----0.6340 mm
 - **Max**-----0.7069 mm
- **After 100 Cycles**
 - **Min**-----0.6347 mm
 - **Max**-----0.7004 mm
- **Thermal**
 - **Min**-----0.7081 mm
 - **Max**-----0.9805 mm
- **Humidity**
 - **Min**-----0.8347 mm
 - **Max**-----0.9835 mm

Female

- **Initial**
 - **Min**-----0.6291 mm
 - **Max**-----0.6942 mm
- **After 100 Cycles**
 - **Min**-----0.6347 mm
 - **Max**-----0.6948 mm
- **Thermal**
 - **Min**-----0.7016 mm
 - **Max**-----0.9885 mm
- **Humidity**
 - **Min**-----0.8152 mm
 - **Max**-----0.9847 mm

RESULTS Continued**Mating – Unmating Forces**

- **Initial**
 - **Mating**
 - **Min** -----55.86 N
 - **Max** -----68.20 N
 - **Unmating**
 - **Min** -----62.69 N
 - **Max** -----83.50 N
- **After 100 Cycles**
 - **Mating**
 - **Min** -----53.21 N
 - **Max** -----67.70 N
 - **Unmating**
 - **Min** -----65.35 N
 - **Max** -----83.70 N
- **Thermal**
 - **Mating**
 - **Min** -----39.87 N
 - **Max** -----51.70 N
 - **Unmating**
 - **Min** -----51.97 N
 - **Max** -----67.70 N
- **Humidity**
 - **Mating**
 - **Min** -----32.54 N
 - **Max** -----46.00 N
 - **Unmating**
 - **Min** -----41.20 N
 - **Max** -----59.70 N

Normal Force at 0.25 mm deflection

- **Initial**
 - **Min** ----- 104.01 gf **Set ---- 0.003 mm**
 - **Max** ----- 108.08 gf **Set ---- 0.007 mm**
- **Thermal**
 - **Min** ----- 107.29 gf
 - **Max** ----- 115.19 gf

RESULTS Continued**Insulation Resistance minimums, IR**

- **Initial**
 - Mated-----10000Meg Ω ----- Pass
 - Unmated -----10000Meg Ω
- **Thermal**
 - Mated-----10000Meg Ω
 - Unmated -----10000Meg Ω
- **Humidity**
 - Mated----- 4573Meg Ω
 - Unmated -----10000Meg Ω

Dielectric Withstanding Voltage minimums, DWV

- **Minimums**
 - Breakdown Voltage-----630VAC
 - Test Voltage -----473VAC
 - Working Voltage -----158VAC
- **Initial DWV**-----Passed
- **Thermal DWV**-----Passed
- **Humidity DWV**-----Passed

RESULTS Continued**LLCR Durability (216 LLCR test points)**

- **Initial**----- 24.1mOhms Max
- **Durability, 100 Cycles**
 - **<= +5.0 mOhms**----- 216 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**----- 216 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
- **Humidity**
 - **<= +5.0 mOhms**----- 216 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

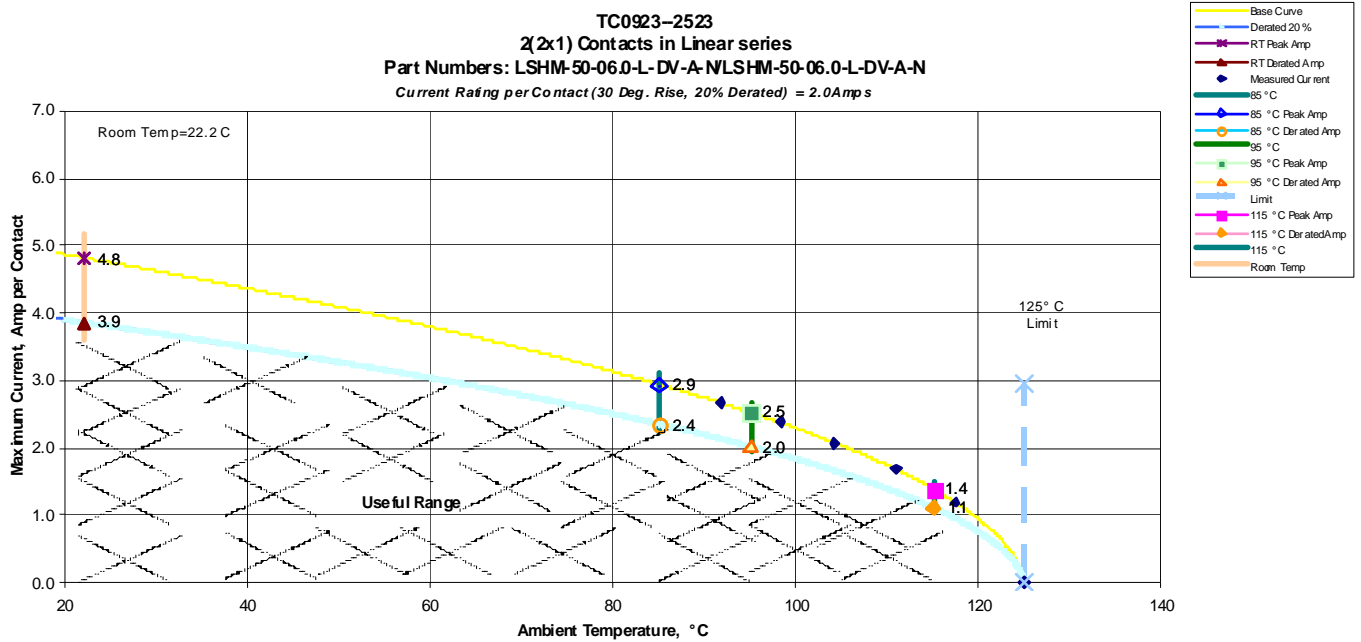
LLCR Gas Tight (216 LLCR test points)

- **Initial**----- 27.0mOhms Max
- **Gas-Tight**
 - **<= +5.0 mOhms**----- 216 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

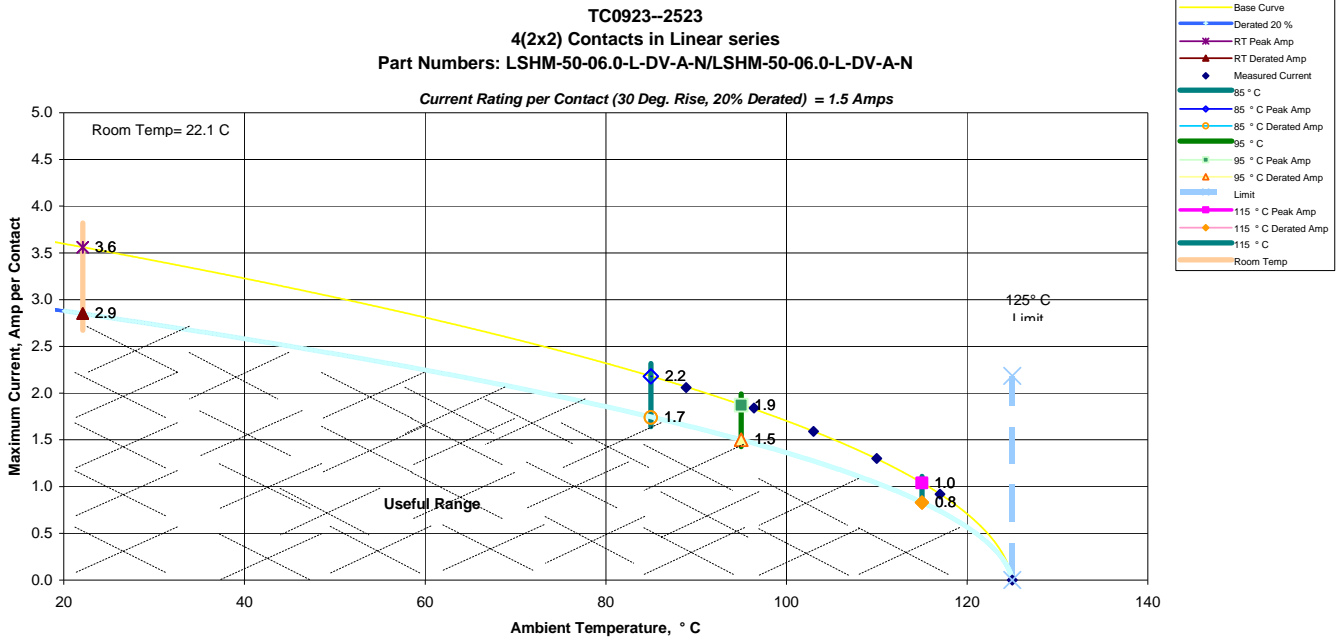
TEMPERATURE RISE (Current Carrying Capacity, CCC):

- 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



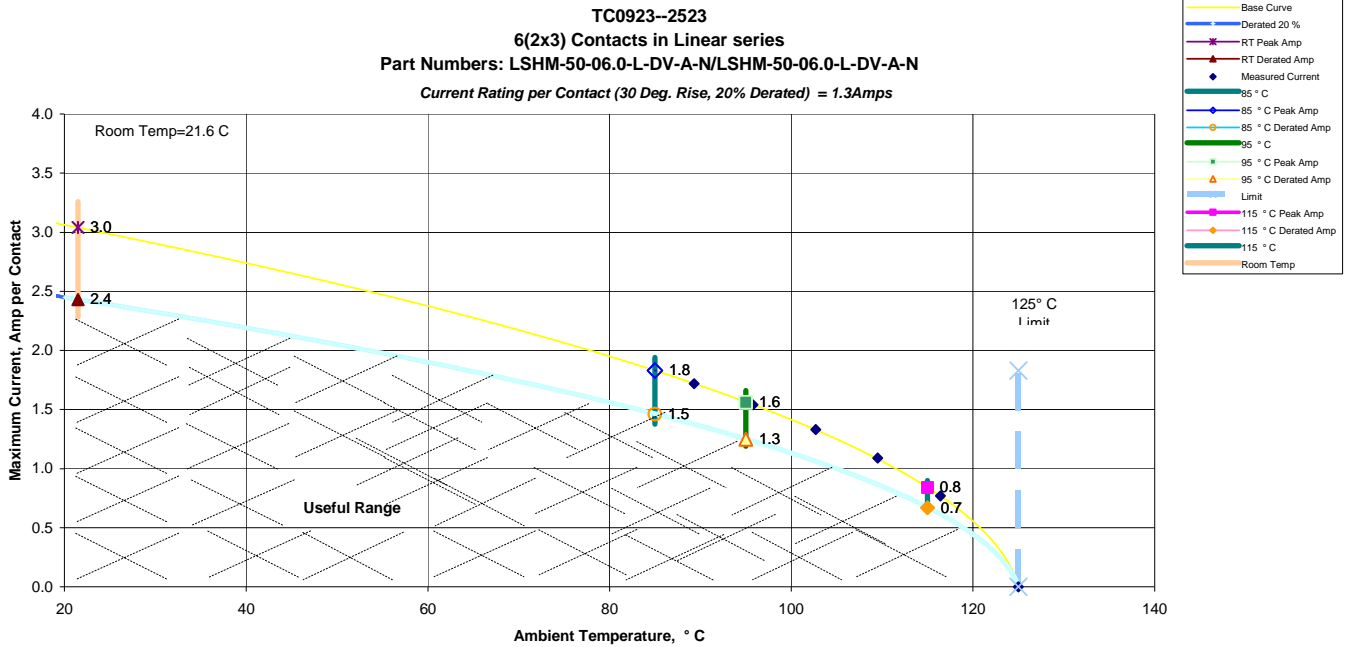
DATA SUMMARIES Continued

b. Linear configuration with 4 adjacent conductors/contacts powered



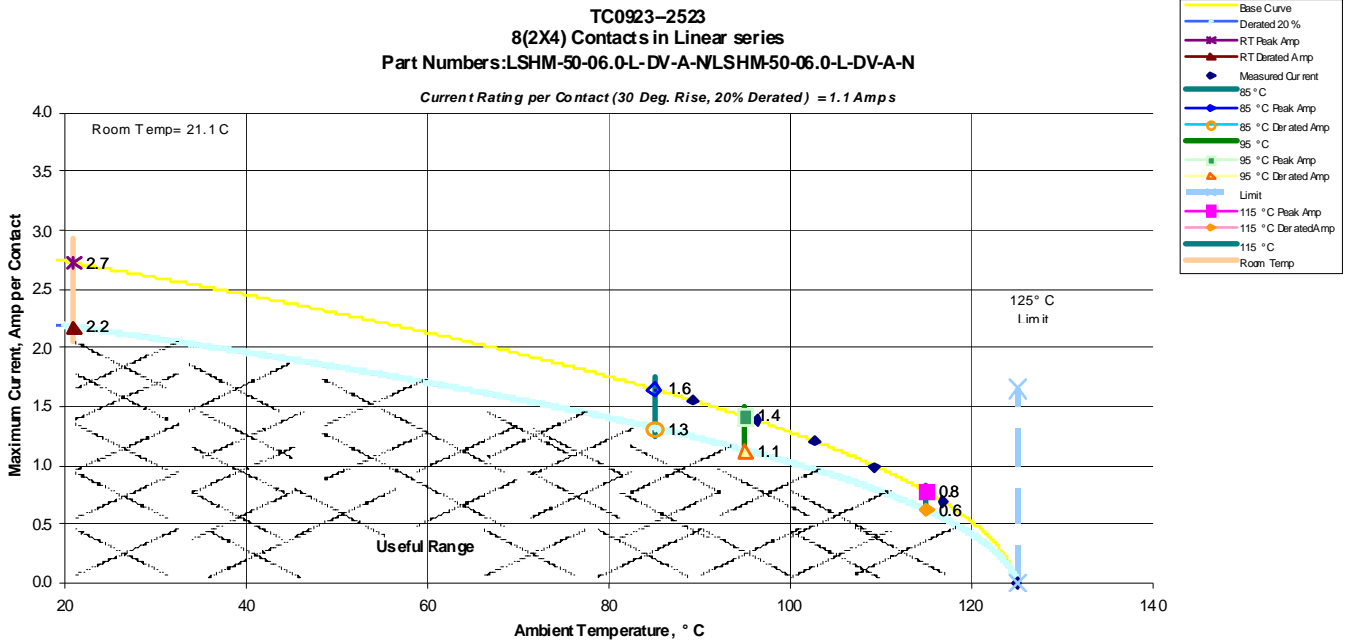
DATA SUMMARIES Continued

c. Linear configuration with 6 adjacent conductors/contacts powered



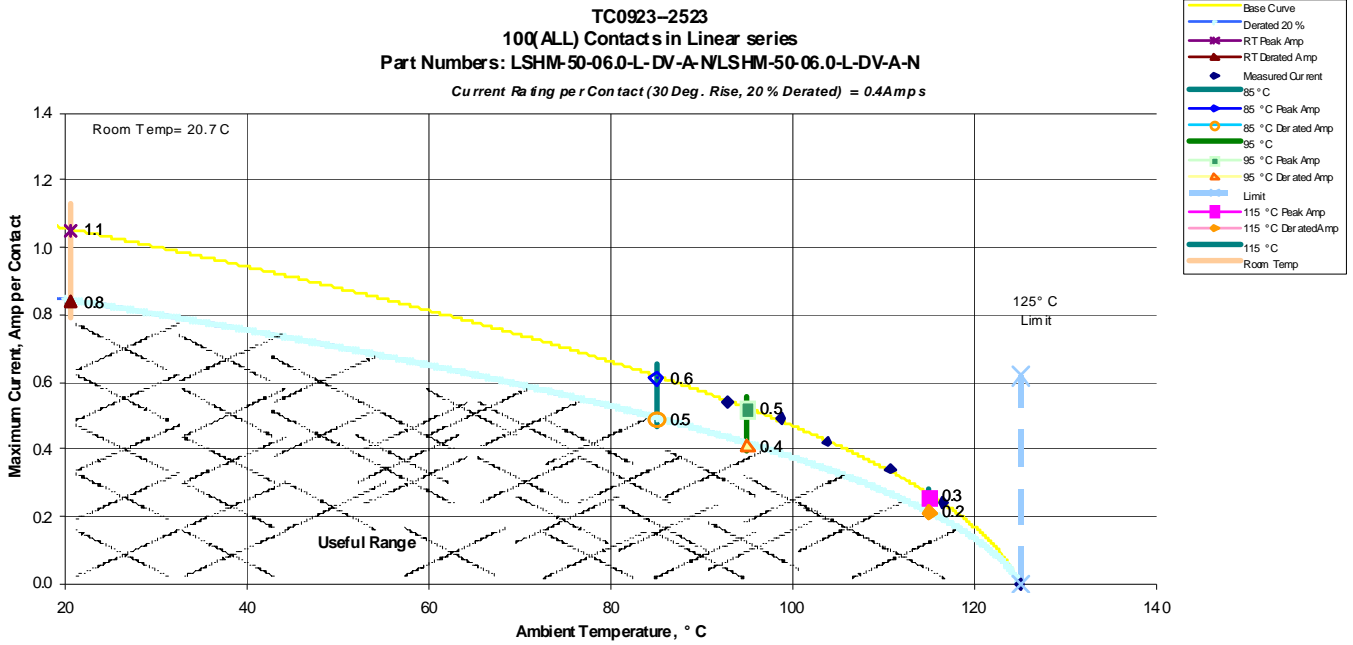
DATA SUMMARIES Continued

d. Linear configuration with 8 adjacent conductors/contacts powered



DATA SUMMARIES Continued

e. Linear configuration with all adjacent conductors/contacts powered



DATA SUMMARIES Continued**CONTACT GAPS Durability:****Male**

Initial		After 100 Cycles		After Thermal		After Humidity	
Units:	mm	Units:	mm	Units:	mm	Units:	mm
<i>Minimum</i>	0.6340	<i>Minimum</i>	0.6347	<i>Minimum</i>	0.7081	<i>Minimum</i>	0.8347
<i>Maximum</i>	0.7069	<i>Maximum</i>	0.7004	<i>Maximum</i>	0.9805	<i>Maximum</i>	0.9835
<i>Average</i>	0.6714	<i>Average</i>	0.6724	<i>Average</i>	0.8599	<i>Average</i>	0.8668
<i>St. Dev.</i>	0.0142	<i>St. Dev.</i>	0.0098	<i>St. Dev.</i>	0.0425	<i>St. Dev.</i>	0.0216
<i>Count</i>	500	<i>Count</i>	500	<i>Count</i>	500	<i>Count</i>	500

Female

Initial		After 100 Cycles		After Thermal		After Humidity	
Units:	mm	Units:	mm	Units:	mm	Units:	mm
<i>Minimum</i>	0.6291	<i>Minimum</i>	0.6437	<i>Minimum</i>	0.7106	<i>Minimum</i>	0.8152
<i>Maximum</i>	0.6942	<i>Maximum</i>	0.6948	<i>Maximum</i>	0.9885	<i>Maximum</i>	0.9847
<i>Average</i>	0.6661	<i>Average</i>	0.6656	<i>Average</i>	0.8534	<i>Average</i>	0.8594
<i>St. Dev.</i>	0.0137	<i>St. Dev.</i>	0.0105	<i>St. Dev.</i>	0.0451	<i>St. Dev.</i>	0.0242
<i>Count</i>	500	<i>Count</i>	500	<i>Count</i>	500	<i>Count</i>	500

DATA SUMMARIES Continued**MATING/UNMATING:**

	Initial				After 100 Cycles			
	Mating		Unmating		Mating		Unmating	
	Force (Oz)	Force (N)	Force (Oz)	Force (N)	Force (Oz)	Force (N)	Force (Oz)	Force (N)
Minimum	201.1	55.86	225.7	62.69	191.6	53.21	235.3	65.35
Maximum	245.4	68.2	300.7	83.5	243.7	67.7	301.4	83.7
Average	224.7	62.4	263.6	73.2	213.5	59.3	267.5	74.3
	After Thermals				After Humidity			
	Mating		Unmating		Mating		Unmating	
	Force (Oz)	Force (N)	Force (Oz)	Force (N)	Force (Oz)	Force (N)	Force (Oz)	Force (N)
Minimum	143.5	39.87	187.1	51.97	117.1	32.54	148.3	41.20
Maximum	186.2	51.7	243.7	67.7	165.4	46.0	214.9	59.7
Average	165.0	45.8	208.9	58.0	141.4	39.3	177.0	49.2

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 mm Forces in Grams					
	0.050	0.100	0.150	0.200	0.250	SET
Averages	22.75	44.62	65.99	86.66	105.98	0.0045
Min	21.90	43.40	65.00	85.10	104.01	0.0030
Max	24.00	46.00	67.50	88.00	108.08	0.0070
St. Dev	0.76	0.78	0.87	0.81	1.41	0.0016
Count	15	15	15	15	15	15

Thermal	Deflections in mm, Forces in Grams					
	0.050	0.100	0.150	0.200	0.250	SET
Averages	23.76	46.34	67.87	89.65	110.52	0.0019
Min	22.60	43.90	64.90	86.20	107.29	0.0000
Max	25.40	48.40	70.20	93.20	115.19	0.0050
St. Dev	0.76	1.15	1.46	2.00	2.54	0.0019
Count	15	15	15	15	15	15

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

Initial Insulation Resistance			
Measured In Meg Ohms			
Pin to Pin			
	Mated	Unmated	
	x	x	x
Sample#	LSHM/LSHM	LSHM	LSHM
1	10000	10000	10000
2	10000	10000	10000

Thermal Insulation Resistance			
Measured In Meg Ohms			
Pin to Pin			
	Mated	Unmated	
	x	x	x
Sample#	LSHM/LSHM	LSHM	LSHM
1	10000	10000	10000
2	10000	10000	10000

Humidity Insulation Resistance			
Measured In Meg Ohms			
Pin to Pin			
	Mated	Unmated	
	x	x	x
Sample#	LSHM/LSHM	LSHM	LSHM
1	4986	10000	10000
2	4573	10000	10000

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

Initial Breakdown Voltage			
Test Voltage <i>Until Breakdown Occurs</i>			
Pin to Pin			
Mated		Unmated	
x			
Sample#	LSHM/LSHM	LSHM	LSHM
1	750	750	740
2	750	630	780

Initial DWV			
Test Voltage= 473			
Pin to Pin			
Mated		Unmated	
Sample#	LSHM/LSHM	LSHM	LSHM
1	473	473	473
2	473	473	473

Thermal Test Voltage			
Test Voltage= 473			
Pin to Pin			
Mated		Unmated	
Sample#	LSHM/LSHM	LSHM	LSHM
1	473	473	473
2	473	473	473

Humidity Test Voltage			
Test Voltage= 473			
Pin to Pin			
Mated		Unmated	
Sample#	LSHM/LSHM	LSHM	LSHM
1	473	473	473
2	473	473	473

DATA SUMMARIES Continued**LLCR Durability:**

- 1) A total of 216 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

Date	Jun. 09 2009	Jun. 10 2009	Jun. 22 2009	Jul. 03 2009
Room Temp C	23	23	26	25
RH	66%	66%	51%	52%
Name	Kason He	Kason He	Kason He	KasonHe
mOhm values	Actual Initial	Delta 100 Cycles	Delta Thermal	Delta Humidity
Average	22.2	0.1	0.8	0.5
St. Dev.	0.8	0.7	0.9	0.8
Min	20.2	-1.5	-1.3	-1.6
Max	24.1	2.5	3.4	3.8
Count	216	216	216	216

How many samples are being tested? **9**

How many contacts are on each board? **24**

	Stable	Minor	Acceptable	Marginal	Unstable	Open
100 Cycles	216	0	0	0	0	0
Thermal	216	0	0	0	0	0
Humidity	216	0	0	0	0	0

DATA SUMMARIES Continued

LLCR Gas Tight:

- 1) A total of 216 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

Date	Jun. 09 2009	Jun. 25 2009
Room Temp C	23	22
RH	65%	55%
Name	Kason He	Kason He
mOhm values	Actual Initial	Delta Gas Tight
Average	22.3	0.3
St. Dev.	0.8	0.6
Min	20.5	-2.5
Max	27.0	3.5
Count	216	216

How many samples are being tested?	<u>9</u>
How many contacts are on each board?	<u>24</u>

	Stable	Minor	Acceptable	Marginal	Unstable	Open
Gas Tight	216	0	0	0	0	0

DATA

CONTACT GAPS:

Male

Initial										
Units: mm										
Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.6798	0.6895	0.6714	0.6532	0.6757	0.6535	0.6963	0.6721	0.6488	0.6598
2	0.6658	0.6760	0.6604	0.6452	0.6686	0.6410	0.6849	0.6616	0.6361	0.6503
3	0.6648	0.6762	0.6564	0.6419	0.6618	0.6379	0.6790	0.6621	0.6340	0.6470
4	0.6651	0.6764	0.6600	0.6439	0.6653	0.6379	0.6827	0.6592	0.6356	0.6469
5	0.6738	0.6877	0.6691	0.6527	0.6747	0.6544	0.6912	0.6707	0.6461	0.6580
6	0.6715	0.6890	0.6715	0.6536	0.6760	0.6544	0.6879	0.6702	0.6454	0.6594
7	0.6664	0.6848	0.6648	0.6460	0.6717	0.6467	0.6837	0.6656	0.6455	0.6542
8	0.6673	0.6860	0.6648	0.6501	0.6731	0.6464	0.6834	0.6674	0.6441	0.6505
9	0.6707	0.6869	0.6677	0.6516	0.6698	0.6575	0.6831	0.6682	0.6476	0.6547
10	0.6820	0.6996	0.6784	0.6641	0.6811	0.6673	0.6927	0.6788	0.6647	0.6711
11	0.6776	0.6913	0.6747	0.6565	0.6784	0.6627	0.6874	0.6730	0.6590	0.6644
12	0.6729	0.6882	0.6677	0.6505	0.6716	0.6561	0.6823	0.6684	0.6534	0.6571
13	0.6689	0.6865	0.6716	0.6485	0.6710	0.6518	0.6811	0.6686	0.6541	0.6556
14	0.6734	0.6888	0.6710	0.6508	0.6738	0.6557	0.6788	0.6638	0.6567	0.6570
15	0.6788	0.6935	0.6800	0.6604	0.6813	0.6642	0.6912	0.6759	0.6654	0.6666
16	0.6777	0.6941	0.6831	0.6616	0.6816	0.6650	0.6872	0.6754	0.6659	0.6642
17	0.6733	0.6874	0.6719	0.6550	0.6780	0.6606	0.6739	0.6717	0.6610	0.6590
18	0.6732	0.6865	0.6717	0.6579	0.6737	0.6623	0.6702	0.6711	0.6609	0.6521
19	0.6787	0.6883	0.6705	0.6549	0.6699	0.6645	0.6708	0.6685	0.6650	0.6562
20	0.6874	0.6995	0.6813	0.6695	0.6815	0.6785	0.6805	0.6812	0.6758	0.6705
21	0.6848	0.6948	0.6766	0.6616	0.6806	0.6701	0.6783	0.6723	0.6742	0.6613
22	0.6746	0.6908	0.6717	0.6567	0.6719	0.6619	0.6679	0.6637	0.6644	0.6554
23	0.6753	0.6932	0.6692	0.6573	0.6693	0.6647	0.6662	0.6629	0.6648	0.6544
24	0.6783	0.6936	0.6717	0.6614	0.6704	0.6621	0.6694	0.6647	0.6692	0.6571
25	0.6895	0.7047	0.6814	0.6761	0.6821	0.6782	0.6786	0.6749	0.6809	0.6657
26	0.6886	0.7012	0.6759	0.6670	0.6757	0.6740	0.6732	0.6712	0.6803	0.6624
27	0.6815	0.6975	0.6690	0.6635	0.6691	0.6653	0.6642	0.6644	0.6739	0.6555
28	0.6763	0.6973	0.6677	0.6644	0.6663	0.6607	0.6613	0.6632	0.6696	0.6499
29	0.6794	0.6950	0.6686	0.6690	0.6670	0.6703	0.6624	0.6562	0.6717	0.6527
30	0.6872	0.7069	0.6772	0.6732	0.6754	0.6789	0.6708	0.6675	0.6819	0.6645
31	0.6893	0.7061	0.6775	0.6785	0.6820	0.6809	0.6726	0.6683	0.6885	0.6656
32	0.6855	0.7069	0.6717	0.6690	0.6771	0.6688	0.6640	0.6627	0.6849	0.6566
33	0.6832	0.7024	0.6696	0.6714	0.6684	0.6702	0.6638	0.6603	0.6830	0.6522
34	0.6859	0.7067	0.6721	0.6720	0.6722	0.6711	0.6604	0.6629	0.6848	0.6558
35	0.6917	0.7008	0.6755	0.6781	0.6813	0.6738	0.6673	0.6688	0.6929	0.6634
36	0.6861	0.6939	0.6750	0.6746	0.6713	0.6711	0.6586	0.6619	0.6854	0.6584
37	0.6777	0.7012	0.6698	0.6675	0.6682	0.6669	0.6544	0.6593	0.6773	0.6517
38	0.6791	0.6984	0.6647	0.6700	0.6649	0.6650	0.6522	0.6558	0.6821	0.6518
39	0.6793	0.7021	0.6623	0.6736	0.6608	0.6678	0.6506	0.6512	0.6823	0.6495
40	0.6864	0.6979	0.6713	0.6755	0.6734	0.6707	0.6555	0.6635	0.6909	0.6528
41	0.6881	0.6971	0.6750	0.6793	0.6768	0.6733	0.6610	0.6656	0.6966	0.6587
42	0.6864	0.6967	0.6698	0.6774	0.6698	0.6718	0.6540	0.6606	0.6915	0.6569

43	0.6820	0.7005	0.6668	0.6740	0.6688	0.6721	0.6504	0.6590	0.6923	0.6538
44	0.6844	0.7007	0.6681	0.6799	0.6709	0.6715	0.6914	0.6601	0.6941	0.6517
45	0.6880	0.6970	0.6725	0.6881	0.6760	0.6775	0.6553	0.6686	0.7000	0.6596
46	0.6891	0.6942	0.6715	0.6875	0.6753	0.6792	0.6521	0.6658	0.7033	0.6587
47	0.6821	0.6972	0.6693	0.6816	0.6777	0.6740	0.6492	0.6691	0.6997	0.6542
48	0.6787	0.6967	0.6638	0.6829	0.6685	0.6736	0.6419	0.6627	0.6954	0.6516
49	0.6775	0.6960	0.6637	0.6838	0.6655	0.6705	0.6409	0.6621	0.6982	0.6507
50	0.6792	0.6984	0.6638	0.6881	0.6677	0.6886	0.6433	0.6692	0.7066	0.6596
After 100 Cycles										
Units: mm										
Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.6858	0.6958	0.6788	0.6869	0.6803	0.6491	0.6829	0.6634	0.6806	0.6650
2	0.6725	0.6830	0.6661	0.6773	0.6706	0.6387	0.6754	0.6542	0.6667	0.6551
3	0.6706	0.6803	0.6645	0.6787	0.6658	0.6360	0.6730	0.6549	0.6630	0.6523
4	0.6710	0.6800	0.6684	0.6766	0.6681	0.6347	0.6736	0.6526	0.6635	0.6527
5	0.6791	0.6889	0.6760	0.6806	0.6764	0.6517	0.6803	0.6636	0.6707	0.6618
6	0.6749	0.6899	0.6777	0.6804	0.6774	0.6517	0.6831	0.6649	0.6691	0.6635
7	0.6721	0.6853	0.6717	0.6816	0.6724	0.6449	0.6741	0.6598	0.6692	0.6589
8	0.6718	0.6835	0.6705	0.6844	0.6722	0.6435	0.6761	0.6607	0.6674	0.6542
9	0.6742	0.6841	0.6731	0.6780	0.6708	0.6527	0.6772	0.6618	0.6683	0.6578
10	0.6837	0.6908	0.6801	0.6915	0.6821	0.6625	0.6863	0.6721	0.6822	0.6716
11	0.6792	0.6850	0.6786	0.6839	0.6788	0.6584	0.6831	0.6676	0.6758	0.6656
12	0.6742	0.6812	0.6728	0.6790	0.6736	0.6524	0.6778	0.6639	0.6711	0.6591
13	0.6680	0.6793	0.6744	0.6736	0.6721	0.6481	0.6764	0.6641	0.6698	0.6579
14	0.6739	0.6815	0.6749	0.6787	0.6739	0.6541	0.6753	0.6610	0.6716	0.6590
15	0.6785	0.6848	0.6825	0.6896	0.6815	0.6590	0.6851	0.6735	0.6788	0.6695
16	0.6811	0.6830	0.6861	0.6855	0.6837	0.6617	0.6845	0.6730	0.6788	0.6671
17	0.6751	0.6770	0.6750	0.6809	0.6790	0.6594	0.6774	0.6707	0.6739	0.6617
18	0.6765	0.6749	0.6758	0.6808	0.6748	0.6612	0.6769	0.6696	0.6726	0.6554
19	0.6785	0.6782	0.6751	0.6813	0.6738	0.6633	0.6800	0.6691	0.6759	0.6596
20	0.6862	0.6850	0.6854	0.6928	0.6841	0.6773	0.6860	0.6813	0.6834	0.6711
21	0.6841	0.6803	0.6811	0.6878	0.6830	0.6699	0.6869	0.6742	0.6819	0.6635
22	0.6746	0.6731	0.6783	0.6783	0.6759	0.6631	0.6769	0.6682	0.6722	0.6600
23	0.6748	0.6843	0.6751	0.6772	0.6741	0.6670	0.6753	0.6682	0.6719	0.6570
24	0.6771	0.6748	0.6774	0.6779	0.6742	0.6655	0.6764	0.6704	0.6748	0.6606
25	0.6875	0.6869	0.6865	0.6818	0.6859	0.6819	0.6893	0.6815	0.6839	0.6680
26	0.6862	0.6803	0.6824	0.6812	0.6796	0.6771	0.6806	0.6776	0.6816	0.6657
27	0.6800	0.7004	0.6771	0.6781	0.6727	0.6696	0.6739	0.6729	0.6756	0.6596
28	0.6738	0.6743	0.6746	0.6742	0.6701	0.6660	0.6759	0.6707	0.6697	0.6538
29	0.6753	0.6697	0.6755	0.6741	0.6704	0.6735	0.6765	0.6657	0.6704	0.6551
30	0.6832	0.6770	0.6827	0.6860	0.6786	0.6821	0.6824	0.6789	0.6780	0.6659
31	0.6834	0.6778	0.6841	0.6841	0.6836	0.6835	0.6882	0.6782	0.6822	0.6667
32	0.6801	0.6775	0.6783	0.6729	0.6766	0.6731	0.6778	0.6741	0.6778	0.6584
33	0.6781	0.6719	0.6758	0.6697	0.6706	0.6743	0.6789	0.6714	0.6736	0.6542
34	0.6787	0.6746	0.6760	0.6724	0.6732	0.6762	0.6764	0.6727	0.6736	0.6565
35	0.6839	0.6741	0.6810	0.6780	0.6820	0.6800	0.6833	0.6786	0.6802	0.6631
36	0.6775	0.6744	0.6807	0.6769	0.6719	0.6754	0.6773	0.6763	0.6720	0.6586
37	0.6697	0.6626	0.6758	0.6662	0.6674	0.6722	0.6739	0.6703	0.6638	0.6513
38	0.6691	0.6579	0.6696	0.6676	0.6653	0.6707	0.6741	0.6689	0.6660	0.6518

39	0.6695	0.6600	0.6691	0.6574	0.6629	0.6714	0.6708	0.6675	0.6660	0.6497
40	0.6749	0.6653	0.6748	0.6610	0.6724	0.6741	0.6738	0.6768	0.6691	0.6527
41	0.6782	0.6680	0.6784	0.6594	0.6724	0.6771	0.6760	0.6776	0.6735	0.6570
42	0.6748	0.6643	0.6736	0.6582	0.6683	0.6781	0.6717	0.6745	0.6681	0.6565
43	0.6711	0.6625	0.6715	0.6556	0.6665	0.6778	0.6691	0.6728	0.6672	0.6536
44	0.6731	0.6696	0.6728	0.6581	0.6694	0.6790	0.6656	0.6761	0.6677	0.6519
45	0.6771	0.6701	0.6768	0.6545	0.6739	0.6870	0.6762	0.6834	0.6708	0.6601
46	0.6790	0.6661	0.6758	0.6608	0.6729	0.6887	0.6707	0.6833	0.6716	0.6597
47	0.6703	0.6629	0.6736	0.6579	0.6737	0.6837	0.6680	0.6837	0.6675	0.6546
48	0.6697	0.6630	0.6705	0.6553	0.6660	0.6838	0.6645	0.6789	0.6630	0.6527
49	0.6692	0.6539	0.6713	0.6504	0.6632	0.6805	0.6645	0.6826	0.6656	0.6518
50	0.6696	0.6521	0.6713	0.6522	0.6660	0.6990	0.6687	0.6850	0.6680	0.6932
After Thermal										
Units: mm										
Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.9400	0.8060	0.7578	0.8708	0.8209	0.7853	0.8768	0.9222	0.8511	0.8574
2	0.7300	0.7532	0.8506	0.8428	0.8439	0.8545	0.8676	0.7340	0.8238	0.8503
3	0.7505	0.8378	0.8545	0.8876	0.8464	0.8450	0.8220	0.8541	0.8745	0.7168
4	0.9042	0.7896	0.8921	0.9247	0.7082	0.8959	0.7106	0.7770	0.8862	0.8156
5	0.7695	0.8518	0.7809	0.8400	0.7401	0.9317	0.7590	0.8505	0.9163	0.9280
6	0.8388	0.8808	0.8974	0.8302	0.7081	0.8429	0.8837	0.8750	0.8909	0.7809
7	0.8927	0.8131	0.9055	0.8580	0.7675	0.8545	0.8133	0.8737	0.8188	0.8418
8	0.8397	0.8205	0.8808	0.8608	0.8066	0.8361	0.8280	0.9204	0.8473	0.8236
9	0.7855	0.7961	0.7520	0.8716	0.8902	0.8851	0.7998	0.8574	0.8348	0.8662
10	0.7537	0.8609	0.9476	0.8942	0.8616	0.8367	0.8714	0.8537	0.8915	0.8847
11	0.8932	0.8666	0.8723	0.8671	0.8838	0.8313	0.8689	0.8832	0.9190	0.8893
12	0.8858	0.8092	0.9185	0.8082	0.7820	0.8530	0.8115	0.8824	0.8799	0.9353
13	0.7115	0.8984	0.8490	0.9082	0.8026	0.8021	0.8132	0.8674	0.8628	0.8880
14	0.8638	0.8281	0.8778	0.8861	0.8133	0.8384	0.8258	0.8111	0.8504	0.8369
15	0.8581	0.8504	0.9180	0.9805	0.8465	0.8309	0.8043	0.8663	0.8744	0.8499
16	0.9503	0.8605	0.8487	0.8835	0.9003	0.8015	0.8560	0.8637	0.8676	0.8955
17	0.7772	0.9007	0.7139	0.8578	0.8476	0.8575	0.8378	0.8773	0.8928	0.8861
18	0.8757	0.8199	0.8420	0.8576	0.8565	0.8102	0.8466	0.8427	0.8359	0.8532
19	0.8781	0.8136	0.8791	0.8551	0.8611	0.8804	0.8289	0.8486	0.8436	0.8659
20	0.8640	0.8475	0.8865	0.8762	0.8687	0.8616	0.8674	0.8687	0.8488	0.8146
21	0.8679	0.8648	0.8728	0.8718	0.8856	0.8812	0.8794	0.8658	0.8787	0.8464
22	0.8713	0.8503	0.8965	0.8639	0.8698	0.8738	0.8691	0.8568	0.8635	0.8667
23	0.8633	0.8475	0.8678	0.8539	0.8662	0.8696	0.8794	0.8522	0.8620	0.8354
24	0.8732	0.8569	0.8687	0.8552	0.8668	0.8644	0.8633	0.8535	0.8606	0.8636
25	0.8751	0.8696	0.8732	0.8650	0.8737	0.8734	0.8780	0.8633	0.8718	0.8682
26	0.8767	0.8663	0.8657	0.8645	0.8680	0.8695	0.8686	0.8618	0.8753	0.8639
27	0.8683	0.8594	0.8687	0.8634	0.8599	0.8607	0.8733	0.8617	0.8697	0.8553
28	0.8934	0.8594	0.8741	0.8646	0.8677	0.8599	0.8712	0.8621	0.8629	0.8551
29	0.8960	0.8755	0.8753	0.8594	0.8758	0.8782	0.8769	0.8592	0.8650	0.8607
30	0.8835	0.8856	0.9193	0.8783	0.8734	0.8408	0.8910	0.8533	0.8700	0.8628
31	0.8665	0.8708	0.8526	0.8693	0.8703	0.8673	0.8994	0.8585	0.8589	0.8340
32	0.8377	0.8774	0.8408	0.8557	0.8766	0.8538	0.8634	0.8633	0.8728	0.8681
33	0.9013	0.8686	0.8079	0.8608	0.8618	0.8885	0.8515	0.8517	0.8546	0.8497
34	0.8585	0.8452	0.8707	0.8613	0.8704	0.9444	0.8970	0.8867	0.8379	0.8435

35	0.8607	0.8815	0.8582	0.8892	0.7876	0.8669	0.8947	0.9448	0.8712	0.8277
36	0.9046	0.9019	0.9725	0.8477	0.9537	0.8538	0.8436	0.8503	0.8272	0.8184
37	0.8357	0.9045	0.9456	0.8644	0.9109	0.8497	0.9617	0.8909	0.8923	0.8928
38	0.8290	0.8751	0.8343	0.8734	0.8288	0.8658	0.8121	0.8600	0.8362	0.8479
39	0.8751	0.9027	0.8670	0.8637	0.8360	0.9002	0.8880	0.8671	0.8064	0.8365
40	0.8585	0.8906	0.8620	0.8653	0.9757	0.8529	0.9124	0.8559	0.8497	0.8464
41	0.8381	0.8531	0.8523	0.8711	0.8584	0.8450	0.8375	0.8016	0.8369	0.8039
42	0.8946	0.8745	0.8387	0.7664	0.7984	0.8122	0.8737	0.9259	0.8756	0.8379
43	0.8089	0.9628	0.8587	0.8556	0.8950	0.8730	0.8764	0.9025	0.8502	0.8381
44	0.8250	0.9805	0.8593	0.8586	0.8447	0.8702	0.9076	0.9765	0.8195	0.8198
45	0.8404	0.8790	0.9266	0.8853	0.8786	0.8640	0.9041	0.8691	0.8531	0.9756
46	0.7979	0.8584	0.9084	0.8648	0.8031	0.8581	0.9157	0.7535	0.8208	0.8503
47	0.8304	0.8737	0.9695	0.9299	0.8934	0.9064	0.9580	0.8465	0.9800	0.8666
48	0.8875	0.8371	0.8784	0.8151	0.8884	0.9004	0.9365	0.8606	0.8627	0.8432
49	0.8464	0.9713	0.8241	0.9027	0.9153	0.8216	0.8728	0.9797	0.9138	0.8738
50	0.8429	0.9132	0.8203	0.8719	0.8291	0.7879	0.8401	0.7586	0.8600	0.8341

After Humidity

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.6858	0.6958	0.6788	0.6869	0.6803	0.6491	0.6829	0.6634	0.6806	0.6650
2	0.6725	0.6830	0.6661	0.6773	0.6706	0.6387	0.6754	0.6542	0.6667	0.6551
3	0.6706	0.6803	0.6645	0.6787	0.6658	0.6360	0.6730	0.6549	0.6630	0.6523
4	0.6710	0.6800	0.6684	0.6766	0.6681	0.6347	0.6736	0.6526	0.6635	0.6527
5	0.6791	0.6889	0.6760	0.6806	0.6764	0.6517	0.6803	0.6636	0.6707	0.6618
6	0.6749	0.6899	0.6777	0.6804	0.6774	0.6517	0.6831	0.6649	0.6691	0.6635
7	0.6721	0.6853	0.6717	0.6816	0.6724	0.6449	0.6741	0.6598	0.6692	0.6589
8	0.6718	0.6835	0.6705	0.6844	0.6722	0.6435	0.6761	0.6607	0.6674	0.6542
9	0.6742	0.6841	0.6731	0.6780	0.6708	0.6527	0.6772	0.6618	0.6683	0.6578
10	0.6837	0.6908	0.6801	0.6915	0.6821	0.6625	0.6863	0.6721	0.6822	0.6716
11	0.6792	0.6850	0.6786	0.6839	0.6788	0.6584	0.6831	0.6676	0.6758	0.6656
12	0.6742	0.6812	0.6728	0.6790	0.6736	0.6524	0.6778	0.6639	0.6711	0.6591
13	0.6680	0.6793	0.6744	0.6736	0.6721	0.6481	0.6764	0.6641	0.6698	0.6579
14	0.6739	0.6815	0.6749	0.6787	0.6739	0.6541	0.6753	0.6610	0.6716	0.6590
15	0.6785	0.6848	0.6825	0.6896	0.6815	0.6590	0.6851	0.6735	0.6788	0.6695
16	0.6811	0.6830	0.6861	0.6855	0.6837	0.6617	0.6845	0.6730	0.6788	0.6671
17	0.6751	0.6770	0.6750	0.6809	0.6790	0.6594	0.6774	0.6707	0.6739	0.6617
18	0.6765	0.6749	0.6758	0.6808	0.6748	0.6612	0.6769	0.6696	0.6726	0.6554
19	0.6785	0.6782	0.6751	0.6813	0.6738	0.6633	0.6800	0.6691	0.6759	0.6596
20	0.6862	0.6850	0.6854	0.6928	0.6841	0.6773	0.6860	0.6813	0.6834	0.6711
21	0.6841	0.6803	0.6811	0.6878	0.6830	0.6699	0.6869	0.6742	0.6819	0.6635
22	0.6746	0.6731	0.6783	0.6783	0.6759	0.6631	0.6769	0.6682	0.6722	0.6600
23	0.6748	0.6843	0.6751	0.6772	0.6741	0.6670	0.6753	0.6682	0.6719	0.6570
24	0.6771	0.6748	0.6774	0.6779	0.6742	0.6655	0.6764	0.6704	0.6748	0.6606
25	0.6875	0.6869	0.6865	0.6818	0.6859	0.6819	0.6893	0.6815	0.6839	0.6680
26	0.6862	0.6803	0.6824	0.6812	0.6796	0.6771	0.6806	0.6776	0.6816	0.6657
27	0.6800	0.7004	0.6771	0.6781	0.6727	0.6696	0.6739	0.6729	0.6756	0.6596
28	0.6738	0.6743	0.6746	0.6742	0.6701	0.6660	0.6759	0.6707	0.6697	0.6538
29	0.6753	0.6697	0.6755	0.6741	0.6704	0.6735	0.6765	0.6657	0.6704	0.6551
30	0.6832	0.6770	0.6827	0.6860	0.6786	0.6821	0.6824	0.6789	0.6780	0.6659

Part description: LSHM

31	0.6834	0.6778	0.6841	0.6841	0.6836	0.6835	0.6882	0.6782	0.6822	0.6667
32	0.6801	0.6775	0.6783	0.6729	0.6766	0.6731	0.6778	0.6741	0.6778	0.6584
33	0.6781	0.6719	0.6758	0.6697	0.6706	0.6743	0.6789	0.6714	0.6736	0.6542
34	0.6787	0.6746	0.6760	0.6724	0.6732	0.6762	0.6764	0.6727	0.6736	0.6565
35	0.6839	0.6741	0.6810	0.6780	0.6820	0.6800	0.6833	0.6786	0.6802	0.6631
36	0.6775	0.6744	0.6807	0.6769	0.6719	0.6754	0.6773	0.6763	0.6720	0.6586
37	0.6697	0.6626	0.6758	0.6662	0.6674	0.6722	0.6739	0.6703	0.6638	0.6513
38	0.6691	0.6579	0.6696	0.6676	0.6653	0.6707	0.6741	0.6689	0.6660	0.6518
39	0.6695	0.6600	0.6691	0.6574	0.6629	0.6714	0.6708	0.6675	0.6660	0.6497
40	0.6749	0.6653	0.6748	0.6610	0.6724	0.6741	0.6738	0.6768	0.6691	0.6527
41	0.6782	0.6680	0.6784	0.6594	0.6724	0.6771	0.6760	0.6776	0.6735	0.6570
42	0.6748	0.6643	0.6736	0.6582	0.6683	0.6781	0.6717	0.6745	0.6681	0.6565
43	0.6711	0.6625	0.6715	0.6556	0.6665	0.6778	0.6691	0.6728	0.6672	0.6536
44	0.6731	0.6696	0.6728	0.6581	0.6694	0.6790	0.6656	0.6761	0.6677	0.6519
45	0.6771	0.6701	0.6768	0.6545	0.6739	0.6870	0.6762	0.6834	0.6708	0.6601
46	0.6790	0.6661	0.6758	0.6608	0.6729	0.6887	0.6707	0.6833	0.6716	0.6597
47	0.6703	0.6629	0.6736	0.6579	0.6737	0.6837	0.6680	0.6837	0.6675	0.6546
48	0.6697	0.6630	0.6705	0.6553	0.6660	0.6838	0.6645	0.6789	0.6630	0.6527
49	0.6692	0.6539	0.6713	0.6504	0.6632	0.6805	0.6645	0.6826	0.6656	0.6518
50	0.6696	0.6521	0.6713	0.6522	0.6660	0.6990	0.6687	0.6850	0.6680	0.6932

Female

Initial										
Units: mm										
Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.6906	0.6901	0.6696	0.6714	0.6487	0.6897	0.6895	0.6813	0.6659	0.6568
2	0.6833	0.6790	0.6536	0.6610	0.6398	0.6819	0.6774	0.6711	0.6532	0.6907
3	0.6818	0.6758	0.6548	0.6587	0.6381	0.6768	0.6706	0.6697	0.6545	0.6442
4	0.6799	0.6759	0.6539	0.6590	0.6385	0.6765	0.6692	0.6681	0.6528	0.6442
5	0.6907	0.6814	0.6646	0.6696	0.6497	0.6848	0.6771	0.6796	0.6623	0.6581
6	0.6885	0.6817	0.6607	0.6707	0.6495	0.6806	0.6760	0.6771	0.6613	0.6569
7	0.6849	0.6696	0.6561	0.6637	0.6473	0.6736	0.6701	0.6713	0.6584	0.6482
8	0.6866	0.6732	0.6610	0.6643	0.6477	0.6765	0.6685	0.6706	0.6629	0.6489
9	0.6862	0.6750	0.6618	0.6657	0.6490	0.6735	0.6698	0.6755	0.6575	0.6522
10	0.6924	0.6837	0.6695	0.6773	0.6623	0.6829	0.6775	0.6834	0.6719	0.6626
11	0.6896	0.6759	0.6649	0.6727	0.6585	0.6735	0.6756	0.6768	0.6667	0.6585
12	0.6831	0.6702	0.6563	0.6689	0.6523	0.6656	0.6657	0.6680	0.6582	0.6496
13	0.6816	0.6655	0.6555	0.6669	0.6504	0.6637	0.6613	0.6689	0.6555	0.6867
14	0.6799	0.6686	0.6552	0.6676	0.6547	0.6626	0.6603	0.6695	0.6565	0.6503
15	0.6915	0.6721	0.6673	0.6777	0.6614	0.6726	0.6715	0.6745	0.6668	0.6597
16	0.6891	0.6750	0.6643	0.6731	0.6634	0.6699	0.6678	0.6728	0.6643	0.6590
17	0.6805	0.6672	0.6633	0.6722	0.6556	0.6621	0.6582	0.6672	0.6596	0.6537
18	0.6835	0.6657	0.6567	0.6708	0.6519	0.6581	0.6578	0.6646	0.6585	0.6500
19	0.6830	0.6636	0.6592	0.6713	0.6549	0.6587	0.6579	0.6647	0.6578	0.6498
20	0.6940	0.6744	0.6718	0.6838	0.6732	0.6714	0.6686	0.6768	0.6708	0.6633
21	0.6875	0.6707	0.6708	0.6800	0.6637	0.6686	0.6632	0.6732	0.6668	0.6595
22	0.6816	0.6614	0.6588	0.6741	0.6581	0.6575	0.6522	0.6635	0.6580	0.6504
23	0.6811	0.6579	0.6582	0.6734	0.6577	0.6516	0.6502	0.6618	0.6575	0.6495
24	0.6820	0.6619	0.6602	0.6742	0.6615	0.6556	0.6499	0.6658	0.6602	0.6542
25	0.6924	0.6745	0.6723	0.6882	0.6747	0.6659	0.6612	0.6747	0.6720	0.6665

Part description: LSHM

26	0.6862	0.6677	0.6681	0.6814	0.6702	0.6614	0.6552	0.6724	0.6689	0.6608
27	0.6819	0.6574	0.6587	0.6754	0.6665	0.6535	0.6466	0.6647	0.6682	0.6523
28	0.6806	0.6583	0.6556	0.6749	0.6658	0.6518	0.6453	0.6590	0.6641	0.6513
29	0.6829	0.6577	0.6604	0.6754	0.6705	0.6506	0.6454	0.6592	0.6601	0.6499
30	0.6915	0.6630	0.6693	0.6842	0.6801	0.6615	0.6555	0.6708	0.6719	0.6601
31	0.6897	0.6655	0.6717	0.6872	0.6829	0.6605	0.6583	0.6754	0.6750	0.6664
32	0.6856	0.6608	0.6629	0.6819	0.6744	0.6545	0.6457	0.6683	0.6675	0.6569
33	0.6838	0.6585	0.6643	0.6785	0.6763	0.6530	0.6441	0.6663	0.6654	0.6563
34	0.6854	0.6582	0.6652	0.6827	0.6777	0.6514	0.6462	0.6661	0.6698	0.6566
35	0.6892	0.6633	0.6723	0.6894	0.6869	0.6592	0.6563	0.6754	0.6739	0.6654
36	0.6858	0.6598	0.6625	0.6806	0.6838	0.6519	0.6410	0.6709	0.6709	0.6603
37	0.6800	0.6559	0.6586	0.6774	0.6808	0.6438	0.6385	0.6602	0.6655	0.6542
38	0.6772	0.6522	0.6536	0.6784	0.6771	0.6409	0.6358	0.6625	0.6651	0.6535
39	0.6771	0.6494	0.6564	0.6775	0.6811	0.6367	0.6347	0.6614	0.6607	0.6525
40	0.6818	0.6577	0.6627	0.6846	0.6886	0.6417	0.6391	0.6670	0.6701	0.6601
41	0.6851	0.6625	0.6668	0.6884	0.6933	0.6468	0.6443	0.6732	0.6715	0.6660
42	0.6787	0.6526	0.6562	0.6859	0.6920	0.6400	0.6368	0.6679	0.6678	0.6595
43	0.6773	0.6508	0.6553	0.6829	0.6899	0.6363	0.6333	0.6661	0.6654	0.6579
44	0.6809	0.6538	0.6575	0.6853	0.6933	0.6392	0.6310	0.6667	0.6720	0.6608
45	0.6837	0.6587	0.6627	0.6893	0.6894	0.6446	0.6392	0.6730	0.6734	0.6664
46	0.6827	0.6593	0.6606	0.6932	0.6921	0.6409	0.6376	0.6686	0.6771	0.6668
47	0.6808	0.6520	0.6565	0.6884	0.6929	0.6359	0.6357	0.6666	0.6691	0.6608
48	0.6746	0.6545	0.6527	0.6848	0.6922	0.6336	0.6311	0.6593	0.6715	0.6606
49	0.6726	0.6509	0.6509	0.6847	0.6942	0.6298	0.6291	0.6600	0.6620	0.6567
50	0.6756	0.6638	0.6542	0.6907	0.6917	0.6373	0.6353	0.6626	0.6701	0.6644

After 100 Cycles

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.6886	0.6755	0.6623	0.6879	0.6800	0.6660	0.6609	0.6769	0.6761	0.6638
2	0.6913	0.6619	0.6471	0.6773	0.6695	0.6540	0.6486	0.6671	0.6610	0.6489
3	0.6889	0.6604	0.6471	0.6742	0.6677	0.6527	0.6441	0.6666	0.6627	0.6478
4	0.6866	0.6622	0.6472	0.6739	0.6676	0.6532	0.6437	0.6663	0.6614	0.6683
5	0.6933	0.6665	0.6592	0.6844	0.6751	0.6611	0.6530	0.6762	0.6708	0.6611
6	0.6942	0.6687	0.6561	0.6842	0.6736	0.6583	0.6521	0.6738	0.6667	0.6600
7	0.6888	0.6569	0.6504	0.6770	0.6711	0.6530	0.6483	0.6698	0.6666	0.6508
8	0.6889	0.6612	0.6530	0.6764	0.6701	0.6553	0.6464	0.6686	0.6692	0.6478
9	0.6890	0.6637	0.6557	0.6758	0.6701	0.6533	0.6493	0.6728	0.6637	0.6534
10	0.6948	0.6731	0.6647	0.6888	0.6811	0.6647	0.6581	0.6790	0.6770	0.6648
11	0.6919	0.6677	0.6602	0.6835	0.6771	0.6561	0.6573	0.6744	0.6713	0.6599
12	0.6863	0.6619	0.6541	0.6780	0.6706	0.6539	0.6507	0.6678	0.6647	0.6535
13	0.6843	0.6580	0.6546	0.6753	0.6681	0.6505	0.6463	0.6691	0.6601	0.6530
14	0.6834	0.6606	0.6532	0.6742	0.6722	0.6520	0.6484	0.6703	0.6617	0.6522
15	0.6919	0.6641	0.6621	0.6866	0.6742	0.6606	0.6593	0.6742	0.6707	0.6608
16	0.6920	0.6676	0.6605	0.6801	0.6759	0.6606	0.6575	0.6718	0.6676	0.6600
17	0.6828	0.6584	0.6584	0.6783	0.6673	0.6546	0.6481	0.6681	0.6618	0.6533
18	0.6841	0.6584	0.6527	0.6771	0.6634	0.6512	0.6483	0.6709	0.6628	0.6512
19	0.6860	0.6567	0.6546	0.6761	0.6637	0.6540	0.6501	0.6663	0.6602	0.6504
20	0.6897	0.6679	0.6656	0.6885	0.6791	0.6677	0.6621	0.6776	0.6740	0.6622
21	0.6856	0.6648	0.6656	0.6838	0.6700	0.6660	0.6575	0.6755	0.6708	0.6592

22	0.6810	0.6553	0.6543	0.6769	0.6643	0.6571	0.6490	0.6665	0.6613	0.6508
23	0.6789	0.6541	0.6535	0.6753	0.6636	0.6538	0.6476	0.6670	0.6606	0.6514
24	0.6807	0.6581	0.6551	0.6753	0.6668	0.6582	0.6491	0.6700	0.6639	0.6548
25	0.6863	0.6718	0.6678	0.6883	0.6752	0.6681	0.6602	0.6791	0.6745	0.6638
26	0.6809	0.6658	0.6642	0.6814	0.6705	0.6665	0.6556	0.6769	0.6725	0.6592
27	0.6759	0.6545	0.6543	0.6735	0.6658	0.6604	0.6502	0.6707	0.6707	0.6518
28	0.6769	0.6557	0.6525	0.6736	0.6643	0.6588	0.6479	0.6663	0.6662	0.6512
29	0.6738	0.6571	0.6553	0.6722	0.6661	0.6597	0.6490	0.6668	0.6619	0.6499
30	0.6844	0.6631	0.6644	0.6816	0.6742	0.6711	0.6600	0.6769	0.6723	0.6578
31	0.6823	0.6675	0.6685	0.6843	0.6775	0.6721	0.6653	0.6820	0.6744	0.6639
32	0.6787	0.6621	0.6584	0.6773	0.6663	0.6673	0.6531	0.6750	0.6690	0.6545
33	0.6735	0.6612	0.6599	0.6734	0.6692	0.6665	0.6524	0.6739	0.6651	0.6529
34	0.6761	0.6597	0.6628	0.6767	0.6670	0.6664	0.6547	0.6740	0.6674	0.6538
35	0.6785	0.6667	0.6695	0.6815	0.6738	0.6748	0.6659	0.6826	0.6726	0.6603
36	0.6756	0.6621	0.6580	0.6719	0.6706	0.6689	0.6527	0.6787	0.6684	0.6555
37	0.6694	0.6557	0.6567	0.6670	0.6659	0.6618	0.6513	0.6696	0.6627	0.6489
38	0.6659	0.6547	0.6528	0.6666	0.6612	0.6597	0.6487	0.6720	0.6608	0.6476
39	0.6691	0.6550	0.6569	0.6641	0.6637	0.6589	0.6497	0.6705	0.6560	0.6472
40	0.6694	0.6615	0.6649	0.6695	0.6675	0.6637	0.6549	0.6755	0.6650	0.6536
41	0.6714	0.6665	0.6693	0.6741	0.6729	0.6686	0.6609	0.6818	0.6644	0.6567
42	0.6657	0.6560	0.6598	0.6688	0.6686	0.6645	0.6544	0.6771	0.6602	0.6528
43	0.6621	0.6560	0.6600	0.6657	0.6672	0.6619	0.6531	0.6763	0.6587	0.6507
44	0.6656	0.6616	0.6634	0.6666	0.6688	0.6646	0.6520	0.6791	0.6648	0.6546
45	0.6681	0.6662	0.6686	0.6708	0.6758	0.6726	0.6611	0.6846	0.6648	0.6598
46	0.6654	0.6682	0.6680	0.6723	0.6761	0.6710	0.6603	0.6829	0.6698	0.6596
47	0.6656	0.6589	0.6588	0.6664	0.6660	0.6681	0.6581	0.6807	0.6621	0.6544
48	0.6566	0.6632	0.6582	0.6612	0.6648	0.6668	0.6568	0.6760	0.6622	0.6541
49	0.6617	0.6597	0.6575	0.6599	0.6648	0.6660	0.6554	0.6751	0.6558	0.6512
50	0.6561	0.6646	0.6603	0.6685	0.6707	0.6718	0.6626	0.6784	0.6564	0.6652

After Thermal

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.8495	0.9098	0.8214	0.7940	0.8677	0.8995	0.8156	0.7508	0.8325	0.8722
2	0.7710	0.7971	0.8480	0.7663	0.8392	0.9023	0.8498	0.8526	0.8237	0.8440
3	0.8019	0.8667	0.8846	0.8122	0.8481	0.9156	0.8214	0.9226	0.7529	0.9433
4	0.7714	0.8871	0.8933	0.8702	0.8470	0.8681	0.8574	0.8884	0.7607	0.7900
5	0.8156	0.8495	0.7785	0.8115	0.7950	0.9031	0.8583	0.7699	0.8575	0.7717
6	0.8045	0.8877	0.7672	0.8159	0.8864	0.8828	0.8384	0.8854	0.8243	0.9095
7	0.8449	0.8458	0.8550	0.7761	0.8813	0.8443	0.8100	0.7860	0.7761	0.9712
8	0.8476	0.8473	0.8196	0.7892	0.8524	0.8387	0.8096	0.9275	0.8678	0.7524
9	0.7571	0.8265	0.8228	0.8151	0.8656	0.7716	0.8258	0.8344	0.7521	0.8962
10	0.8332	0.8746	0.8333	0.7970	0.7674	0.8604	0.8785	0.8118	0.9071	0.9550
11	0.9798	0.8583	0.8244	0.8457	0.8888	0.8859	0.8638	0.8561	0.8596	0.8724
12	0.8028	0.8342	0.8464	0.8644	0.8987	0.8504	0.8243	0.9226	0.8407	0.8873
13	0.7843	0.8320	0.8656	0.8759	0.9333	0.8571	0.8660	0.8988	0.8988	0.8608
14	0.7886	0.8604	0.8248	0.8471	0.9733	0.8526	0.8688	0.8266	0.7247	0.9007
15	0.8396	0.8480	0.8395	0.8308	0.8262	0.8415	0.8556	0.8923	0.7986	0.9061
16	0.9132	0.8640	0.8597	0.8590	0.8081	0.8807	0.8399	0.8948	0.8510	0.9266
17	0.8456	0.8622	0.8464	0.8477	0.8512	0.8626	0.8728	0.7168	0.8538	0.8831

18	0.8781	0.8673	0.8580	0.8564	0.9008	0.8580	0.8391	0.7896	0.8637	0.8507
19	0.8306	0.8540	0.8661	0.8558	0.8761	0.8755	0.8433	0.8704	0.8341	0.8580
20	0.8678	0.8665	0.8630	0.8603	0.8612	0.8544	0.8507	0.8738	0.8572	0.8635
21	0.8868	0.8700	0.8670	0.8742	0.8682	0.8681	0.8633	0.8720	0.8606	0.8036
22	0.8471	0.8596	0.8586	0.8640	0.8403	0.8557	0.8605	0.8479	0.8529	0.8676
23	0.8511	0.8536	0.8563	0.8626	0.8555	0.8620	0.8591	0.8727	0.8529	0.8726
24	0.8649	0.8558	0.8527	0.8581	0.8893	0.8564	0.8583	0.8641	0.8610	0.8637
25	0.8746	0.8633	0.8626	0.8705	0.8660	0.8583	0.8598	0.8697	0.8700	0.8694
26	0.8649	0.8564	0.8628	0.8657	0.8644	0.8547	0.8613	0.8696	0.8649	0.8640
27	0.8624	0.8471	0.8487	0.8663	0.8600	0.8487	0.8496	0.8664	0.8711	0.8494
28	0.8799	0.8568	0.8592	0.8585	0.8566	0.8631	0.8504	0.8630	0.8829	0.8514
29	0.8656	0.8535	0.8476	0.8573	0.8915	0.8446	0.8544	0.8994	0.8625	0.9100
30	0.8550	0.8596	0.8479	0.8600	0.9104	0.8519	0.9455	0.8491	0.8686	0.8401
31	0.8532	0.8411	0.8505	0.8598	0.8618	0.8340	0.8461	0.8604	0.8712	0.8342
32	0.8746	0.8683	0.8631	0.8624	0.9193	0.8539	0.8318	0.8650	0.8168	0.8606
33	0.9216	0.8484	0.8815	0.7980	0.7563	0.8252	0.8412	0.8549	0.8339	0.8297
34	0.9535	0.8389	0.8301	0.9015	0.8151	0.8282	0.8340	0.8482	0.8639	0.8783
35	0.8649	0.8339	0.8682	0.8810	0.8951	0.8497	0.8689	0.8844	0.8675	0.9141
36	0.9422	0.8654	0.8742	0.8552	0.7998	0.8850	0.8698	0.8500	0.8642	0.8083
37	0.9268	0.7265	0.8350	0.8707	0.8745	0.8691	0.8462	0.8797	0.7966	0.8487
38	0.9710	0.8460	0.7155	0.9177	0.8869	0.7918	0.8760	0.8618	0.8420	0.8698
39	0.9221	0.8513	0.8570	0.8899	0.8237	0.8244	0.8315	0.8246	0.8461	0.8595
40	0.8793	0.8683	0.8923	0.9026	0.8370	0.8145	0.8253	0.8927	0.9268	0.8106
41	0.9186	0.8527	0.8317	0.8510	0.7950	0.8252	0.9221	0.8821	0.8318	0.9591
42	0.9019	0.8148	0.7901	0.8600	0.7948	0.7619	0.8783	0.8634	0.8825	0.8569
43	0.9062	0.8314	0.8197	0.8591	0.7847	0.7701	0.9804	0.9163	0.8651	0.7518
44	0.9207	0.8054	0.7301	0.8629	0.8163	0.7734	0.8542	0.9675	0.9365	0.8205
45	0.9290	0.7471	0.8565	0.8804	0.7388	0.9025	0.8472	0.8719	0.9745	0.8564
46	0.8609	0.7724	0.8409	0.8522	0.8434	0.8798	0.7662	0.8080	0.7809	0.7778
47	0.9074	0.8166	0.8206	0.8222	0.9124	0.8951	0.8447	0.8395	0.8848	0.7206
48	0.7174	0.9885	0.8520	0.7839	0.8397	0.8017	0.8533	0.8470	0.8360	0.8083
49	0.9071	0.9760	0.8687	0.8518	0.8828	0.8048	0.8785	0.8279	0.8757	0.7587
50	0.9476	0.9178	0.9795	0.8887	0.8749	0.7106	0.8092	0.7981	0.9367	0.9846

After Humidity

Units: mm

Pos.#	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
1	0.6886	0.6755	0.6623	0.6879	0.6800	0.6660	0.6609	0.6769	0.6761	0.6638
2	0.6913	0.6619	0.6471	0.6773	0.6695	0.6540	0.6486	0.6671	0.6610	0.6489
3	0.6889	0.6604	0.6471	0.6742	0.6677	0.6527	0.6441	0.6666	0.6627	0.6478
4	0.6866	0.6622	0.6472	0.6739	0.6676	0.6532	0.6437	0.6663	0.6614	0.6683
5	0.6933	0.6665	0.6592	0.6844	0.6751	0.6611	0.6530	0.6762	0.6708	0.6611
6	0.6942	0.6687	0.6561	0.6842	0.6736	0.6583	0.6521	0.6738	0.6667	0.6600
7	0.6888	0.6569	0.6504	0.6770	0.6711	0.6530	0.6483	0.6698	0.6666	0.6508
8	0.6889	0.6612	0.6530	0.6764	0.6701	0.6553	0.6464	0.6686	0.6692	0.6478
9	0.6890	0.6637	0.6557	0.6758	0.6701	0.6533	0.6493	0.6728	0.6637	0.6534
10	0.6948	0.6731	0.6647	0.6888	0.6811	0.6647	0.6581	0.6790	0.6770	0.6648
11	0.6919	0.6677	0.6602	0.6835	0.6771	0.6561	0.6573	0.6744	0.6713	0.6599
12	0.6863	0.6619	0.6541	0.6780	0.6706	0.6539	0.6507	0.6678	0.6647	0.6535
13	0.6843	0.6580	0.6546	0.6753	0.6681	0.6505	0.6463	0.6691	0.6601	0.6530

14	0.6834	0.6606	0.6532	0.6742	0.6722	0.6520	0.6484	0.6703	0.6617	0.6522
15	0.6919	0.6641	0.6621	0.6866	0.6742	0.6606	0.6593	0.6742	0.6707	0.6608
16	0.6920	0.6676	0.6605	0.6801	0.6759	0.6606	0.6575	0.6718	0.6676	0.6600
17	0.6828	0.6584	0.6584	0.6783	0.6673	0.6546	0.6481	0.6681	0.6618	0.6533
18	0.6841	0.6584	0.6527	0.6771	0.6634	0.6512	0.6483	0.6709	0.6628	0.6512
19	0.6860	0.6567	0.6546	0.6761	0.6637	0.6540	0.6501	0.6663	0.6602	0.6504
20	0.6897	0.6679	0.6656	0.6885	0.6791	0.6677	0.6621	0.6776	0.6740	0.6622
21	0.6856	0.6648	0.6656	0.6838	0.6700	0.6660	0.6575	0.6755	0.6708	0.6592
22	0.6810	0.6553	0.6543	0.6769	0.6643	0.6571	0.6490	0.6665	0.6613	0.6508
23	0.6789	0.6541	0.6535	0.6753	0.6636	0.6538	0.6476	0.6670	0.6606	0.6514
24	0.6807	0.6581	0.6551	0.6753	0.6668	0.6582	0.6491	0.6700	0.6639	0.6548
25	0.6863	0.6718	0.6678	0.6883	0.6752	0.6681	0.6602	0.6791	0.6745	0.6638
26	0.6809	0.6658	0.6642	0.6814	0.6705	0.6665	0.6556	0.6769	0.6725	0.6592
27	0.6759	0.6545	0.6543	0.6735	0.6658	0.6604	0.6502	0.6707	0.6707	0.6518
28	0.6769	0.6557	0.6525	0.6736	0.6643	0.6588	0.6479	0.6663	0.6662	0.6512
29	0.6738	0.6571	0.6553	0.6722	0.6661	0.6597	0.6490	0.6668	0.6619	0.6499
30	0.6844	0.6631	0.6644	0.6816	0.6742	0.6711	0.6600	0.6769	0.6723	0.6578
31	0.6823	0.6675	0.6685	0.6843	0.6775	0.6721	0.6653	0.6820	0.6744	0.6639
32	0.6787	0.6621	0.6584	0.6773	0.6663	0.6673	0.6531	0.6750	0.6690	0.6545
33	0.6735	0.6612	0.6599	0.6734	0.6692	0.6665	0.6524	0.6739	0.6651	0.6529
34	0.6761	0.6597	0.6628	0.6767	0.6670	0.6664	0.6547	0.6740	0.6674	0.6538
35	0.6785	0.6667	0.6695	0.6815	0.6738	0.6748	0.6659	0.6826	0.6726	0.6603
36	0.6756	0.6621	0.6580	0.6719	0.6706	0.6689	0.6527	0.6787	0.6684	0.6555
37	0.6694	0.6557	0.6567	0.6670	0.6659	0.6618	0.6513	0.6696	0.6627	0.6489
38	0.6659	0.6547	0.6528	0.6666	0.6612	0.6597	0.6487	0.6720	0.6608	0.6476
39	0.6691	0.6550	0.6569	0.6641	0.6637	0.6589	0.6497	0.6705	0.6560	0.6472
40	0.6694	0.6615	0.6649	0.6695	0.6675	0.6637	0.6549	0.6755	0.6650	0.6536
41	0.6714	0.6665	0.6693	0.6741	0.6729	0.6686	0.6609	0.6818	0.6644	0.6567
42	0.6657	0.6560	0.6598	0.6688	0.6686	0.6645	0.6544	0.6771	0.6602	0.6528
43	0.6621	0.6560	0.6600	0.6657	0.6672	0.6619	0.6531	0.6763	0.6587	0.6507
44	0.6656	0.6616	0.6634	0.6666	0.6688	0.6646	0.6520	0.6791	0.6648	0.6546
45	0.6681	0.6662	0.6686	0.6708	0.6758	0.6726	0.6611	0.6846	0.6648	0.6598
46	0.6654	0.6682	0.6680	0.6723	0.6761	0.6710	0.6603	0.6829	0.6698	0.6596
47	0.6656	0.6589	0.6588	0.6664	0.6660	0.6681	0.6581	0.6807	0.6621	0.6544
48	0.6566	0.6632	0.6582	0.6612	0.6648	0.6668	0.6568	0.6760	0.6622	0.6541
49	0.6617	0.6597	0.6575	0.6599	0.6648	0.6660	0.6554	0.6751	0.6558	0.6512
50	0.6561	0.6646	0.6603	0.6685	0.6707	0.6718	0.6626	0.6784	0.6564	0.6652

DATA Continued**MATING/UNMATING FORCE:**

Sample#	Initial		After 100 cycles		After Thermals		After Humidity	
	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>	<u>Mating</u>	<u>Unmating</u>
1	55.86	69.87	53.88	68.77	40.19	53.53	36.24	41.60
2	59.72	71.08	53.21	68.56	45.35	55.76	38.91	50.90
3	64.76	81.73	58.49	73.02	48.37	61.51	45.54	56.80
4	65.35	63.64	61.55	83.72	50.40	53.44	42.55	59.70
5	61.12	67.20	53.45	65.35	40.63	51.97	32.54	43.30
6	62.96	76.84	62.38	77.64	48.25	62.11	37.29	48.60
7	64.37	83.53	62.68	79.23	51.71	67.70	45.95	59.24
8	68.17	82.82	67.69	79.20	39.87	53.40	40.86	41.20
9	60.71	72.95	57.67	70.96	44.80	58.23	36.16	45.20
10	61.08	62.69	61.99	76.49	48.64	62.73	36.84	45.14

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

Initial	Deflections in mm Forces in Grams					
Sample #	0.050	0.100	0.150	0.200	0.250	SET
1	22.60	44.90	67.20	87.30	106.96	0.00600
2	21.90	43.80	65.00	86.20	104.84	0.00300
3	22.20	44.20	65.00	86.20	104.92	0.00300
4	21.90	43.80	65.40	85.80	104.01	0.00300
5	22.20	43.80	66.10	87.30	107.87	0.00300
6	21.90	44.20	65.70	86.20	104.66	0.00500
7	21.90	43.40	65.00	85.10	104.17	0.00300
8	23.00	44.50	65.40	86.20	105.61	0.00700
9	23.70	46.00	67.20	88.00	107.21	0.00600
10	22.60	44.90	66.10	86.60	105.29	0.00500
11	23.70	45.20	65.70	86.60	105.30	0.00500
12	24.00	46.00	67.50	88.00	108.08	0.00700
13	23.00	44.50	65.70	86.90	107.97	0.00300
14	23.00	45.20	67.20	87.30	107.02	0.00300
15	23.70	44.90	65.70	86.20	105.85	0.00500
Thermal	Deflections in mm Forces in Grams					
Sample #	0.050	0.100	0.150	0.200	0.250	SET
1	23.40	46.80	69.00	89.90	110.07	0.00000
2	24.60	46.80	67.70	89.10	108.70	0.00000
3	23.00	46.40	66.90	87.90	108.09	0.00000
4	24.60	47.20	67.70	89.10	109.44	0.00000
5	23.40	45.60	67.70	88.30	108.19	0.00400
6	24.20	48.40	70.20	90.70	111.95	0.00300
7	24.40	48.00	68.60	91.20	111.97	0.00300
8	23.80	44.80	66.10	87.10	107.51	0.00400
9	22.60	43.90	64.90	86.20	107.29	0.00300
10	23.80	45.60	66.90	88.30	109.24	0.00000
11	23.40	45.60	67.70	89.50	110.73	0.00000
12	23.00	46.40	66.90	90.30	111.88	0.00000
13	23.00	46.00	68.20	90.70	112.43	0.00500
14	25.40	46.80	69.80	93.20	115.17	0.00300
15	23.80	46.80	69.80	93.20	115.19	0.00300

DATA Continued**LLCR Durability:**

	mOhm values	Actual	Delta	Delta	Delta
Board	Position	Initial	100 Cycles	Thermal	Humidity
1	P1	23.3	-0.8	0.4	0.4
1	P2	22.5	0.5	0.9	0.2
1	P3	22.8	-0.2	0.7	0.5
1	P4	22.0	0.4	1.2	1.2
1	P5	23.2	-0.9	-0.7	-0.6
1	P6	22.6	0.0	0.2	0.0
1	P7	22.3	-0.5	0.6	0.0
1	P8	21.8	0.2	1.7	1.1
1	P9	22.0	0.5	1.1	0.6
1	P10	22.0	0.6	2.4	1.7
1	P11	22.1	0.0	1.8	1.0
1	P12	22.0	0.5	1.8	1.4
1	P13	22.4	0.3	1.4	0.5
1	P14	22.2	0.0	0.6	0.9
1	P15	22.2	0.0	1.4	1.1
1	P16	22.1	1.4	2.1	1.3
1	P17	22.8	-0.5	3.0	0.8
1	P18	22.4	-0.2	1.4	0.9
1	P19	22.2	0.4	0.8	0.7
1	P20	21.3	-0.4	1.2	0.9
1	P21	21.9	0.1	1.2	0.8
1	P22	22.6	0.3	0.6	0.5
1	P23	23.5	-0.7	-0.1	-0.1
1	P24	23.0	-0.6	0.9	0.2
2	P1	22.9	0.6	1.9	0.3
2	P2	23.3	-0.5	0.6	0.4
2	P3	23.4	0.3	1.6	0.0
2	P4	22.7	0.3	0.9	0.4
2	P5	23.1	-0.4	0.9	-0.1
2	P6	23.2	-0.3	0.8	0.5
2	P7	24.1	-0.4	1.2	-0.4
2	P8	22.9	-0.2	0.8	0.0
2	P9	23.4	-0.3	-0.2	-0.9
2	P10	23.7	-0.4	1.6	0.2
2	P11	23.5	-0.3	-0.3	-0.2
2	P12	23.8	-0.2	1.1	1.3
2	P13	23.6	-0.7	-0.7	0.1
2	P14	23.9	-0.2	0.9	0.6
2	P15	24.0	-0.7	-0.3	1.0
2	P16	24.0	2.5	0.0	0.7
2	P17	24.0	0.3	1.5	1.1
2	P18	24.1	0.3	0.0	-0.1
2	P19	22.7	0.4	0.5	1.3

2	P20	23.4	-1.2	-0.7	-0.7
2	P21	22.4	0.0	0.4	0.3
2	P22	22.6	0.2	0.5	0.3
2	P23	23.0	0.1	0.2	0.1
2	P24	23.0	0.3	0.6	0.6
3	P1	22.0	0.0	1.7	1.5
3	P2	22.1	-0.5	0.5	1.5
3	P3	21.6	0.8	3.4	2.6
3	P4	21.8	0.0	1.9	2.1
3	P5	21.7	0.0	1.5	3.6
3	P6	22.1	-0.3	0.4	1.5
3	P7	22.1	0.4	1.4	1.3
3	P8	21.6	0.8	1.6	3.8
3	P9	21.7	1.1	0.5	1.6
3	P10	21.8	1.1	0.7	0.9
3	P11	21.9	1.0	1.7	1.6
3	P12	21.9	1.1	1.1	1.0
3	P13	22.4	0.7	0.5	1.9
3	P14	22.8	0.7	0.7	0.5
3	P15	21.9	0.9	0.1	2.6
3	P16	22.1	1.2	0.6	1.2
3	P17	23.2	0.4	1.1	0.4
3	P18	22.3	0.7	2.4	1.8
3	P19	22.1	0.1	0.6	-0.2
3	P20	21.4	0.6	1.0	1.0
3	P21	21.4	-0.4	1.3	0.8
3	P22	22.4	-1.0	-0.2	-0.9
3	P23	21.8	0.6	1.7	0.8
3	P24	21.6	0.8	2.3	1.9
4	P1	21.7	0.0	1.4	0.0
4	P2	21.6	1.0	1.5	0.9
4	P3	21.7	0.5	1.2	0.5
4	P4	21.5	0.2	0.8	0.6
4	P5	21.6	0.2	0.9	0.5
4	P6	21.7	0.1	0.2	0.3
4	P7	21.3	0.4	2.6	0.7
4	P8	21.5	0.3	1.0	0.5
4	P9	21.5	0.8	1.6	1.0
4	P10	21.9	1.0	1.5	0.7
4	P11	21.8	0.6	1.1	0.6
4	P12	21.5	0.1	1.4	1.0
4	P13	22.5	-0.2	-0.2	0.0
4	P14	22.1	0.1	0.8	1.2
4	P15	21.9	0.4	1.3	1.3
4	P16	22.6	-0.6	0.7	-0.5
4	P17	22.4	0.4	0.6	0.1
4	P18	21.7	-0.2	1.5	0.7
4	P19	22.1	-0.8	-0.1	-0.5
4	P20	20.9	0.5	0.4	0.3

Part description: LSHM

4	P21	20.4	0.2	0.6	0.2
4	P22	21.1	1.4	2.8	1.1
4	P23	20.9	1.0	1.8	1.5
4	P24	20.9	1.1	1.6	1.0
5	P1	22.2	0.3	1.3	0.5
5	P2	21.5	0.4	0.0	1.0
5	P3	22.0	-0.2	-0.2	-0.3
5	P4	21.8	-0.4	0.9	0.1
5	P5	22.1	-0.9	0.1	2.3
5	P6	22.0	-0.3	-0.7	-0.8
5	P7	21.5	0.0	0.2	-0.2
5	P8	21.3	0.1	0.3	0.7
5	P9	21.5	0.5	0.0	0.6
5	P10	21.4	0.6	0.5	0.9
5	P11	21.8	-0.1	0.5	-0.1
5	P12	21.9	-0.4	-0.7	-0.3
5	P13	21.9	0.1	0.6	0.3
5	P14	22.8	-0.6	-0.9	-0.6
5	P15	22.0	0.2	0.8	0.3
5	P16	22.2	-0.6	-0.1	-0.2
5	P17	22.5	-0.4	-0.4	0.1
5	P18	21.9	0.5	0.3	0.2
5	P19	22.2	-0.3	0.0	-0.5
5	P20	21.0	-0.1	-0.6	-0.3
5	P21	21.3	-0.8	-0.3	-0.7
5	P22	22.1	-0.4	-0.3	-0.5
5	P23	22.1	-0.3	0.0	0.0
5	P24	22.2	-0.6	-0.3	-0.7
6	P1	22.3	0.5	0.1	0.5
6	P2	22.0	1.3	1.4	1.2
6	P3	22.5	-0.2	-0.8	-0.3
6	P4	21.8	-0.3	-0.1	0.1
6	P5	21.7	-0.1	0.4	0.1
6	P6	21.3	0.0	-0.1	0.6
6	P7	21.5	1.3	1.5	1.6
6	P8	21.4	1.8	3.3	3.2
6	P9	21.7	1.3	1.2	0.9
6	P10	21.4	1.7	1.8	1.1
6	P11	22.0	1.2	1.1	1.2
6	P12	21.4	2.2	1.6	1.2
6	P13	21.8	0.9	1.6	1.1
6	P14	22.0	0.8	2.2	1.4
6	P15	21.4	1.2	1.9	1.5
6	P16	21.6	1.4	1.6	1.4
6	P17	21.9	0.9	1.0	0.5
6	P18	21.2	1.8	1.5	1.2
6	P19	21.1	1.5	2.4	1.0
6	P20	20.2	2.4	2.6	1.7
6	P21	21.0	0.5	0.6	0.6

Part description: LSHM

6	P22	21.8	0.3	0.5	0.5
6	P23	22.2	0.8	2.3	1.0
6	P24	21.5	0.9	1.2	0.1
7	P1	22.8	-0.1	0.1	-0.3
7	P2	21.7	0.3	0.9	1.8
7	P3	21.7	-0.3	0.6	-0.2
7	P4	22.7	-0.5	-0.2	-0.1
7	P5	22.1	0.1	0.4	0.1
7	P6	21.5	0.0	0.7	0.2
7	P7	22.3	0.0	0.1	0.1
7	P8	21.1	0.3	1.1	0.9
7	P9	22.1	0.3	0.4	0.3
7	P10	21.9	0.4	1.4	0.4
7	P11	22.1	0.1	0.5	-0.1
7	P12	22.8	-0.4	-0.2	-0.8
7	P13	22.1	0.2	1.6	0.8
7	P14	22.7	0.0	1.4	1.2
7	P15	22.6	-0.2	2.0	0.9
7	P16	23.4	-0.1	1.1	0.8
7	P17	23.1	-0.3	0.8	0.4
7	P18	22.0	0.9	1.6	0.6
7	P19	22.6	0.1	0.5	0.6
7	P20	21.7	0.3	1.0	0.7
7	P21	21.9	-0.5	0.2	0.0
7	P22	22.0	0.3	1.5	0.9
7	P23	22.7	-0.3	0.2	0.1
7	P24	22.7	-0.2	1.0	-0.1
8	P1	22.4	-0.2	0.9	0.1
8	P2	21.8	0.3	2.9	0.6
8	P3	21.6	0.3	3.3	0.8
8	P4	22.6	-0.4	1.6	0.0
8	P5	22.0	0.2	3.0	0.6
8	P6	21.8	0.1	1.1	0.3
8	P7	21.9	-0.5	-0.1	-0.3
8	P8	21.5	0.9	1.1	0.5
8	P9	22.9	-1.0	0.7	-0.4
8	P10	23.4	-1.1	-1.2	-1.4
8	P11	21.9	-0.1	0.0	0.2
8	P12	22.2	-0.6	0.5	0.0
8	P13	23.0	-0.8	-1.0	-1.1
8	P14	22.5	-0.3	-0.3	-0.8
8	P15	22.7	-0.9	1.8	0.3
8	P16	22.1	0.0	1.4	0.5
8	P17	21.8	0.5	0.4	0.1
8	P18	22.6	-1.0	-1.3	-1.6
8	P19	21.6	0.5	0.1	-0.1
8	P20	20.8	-0.3	-0.2	-0.8
8	P21	21.2	0.1	1.5	0.3
8	P22	21.6	0.4	2.4	0.4

8	P23	22.0	0.5	3.2	0.5
8	P24	21.8	0.5	1.2	0.5
9	P1	23.1	-0.8	0.5	0.1
9	P2	22.9	-0.4	0.1	1.7
9	P3	24.0	-1.1	0.3	-0.1
9	P4	22.9	-0.6	0.4	1.8
9	P5	22.8	-0.8	0.1	0.8
9	P6	21.9	0.0	0.4	0.1
9	P7	23.9	-1.5	-0.2	-0.3
9	P8	23.2	-0.5	0.1	0.3
9	P9	23.3	-0.3	0.7	0.6
9	P10	23.3	-0.4	1.0	0.2
9	P11	23.1	-0.1	0.6	0.6
9	P12	23.8	-0.2	-0.1	0.1
9	P13	23.7	-1.3	-0.3	-0.1
9	P14	22.7	-0.7	1.1	0.2
9	P15	23.3	-1.4	0.6	-0.3
9	P16	23.1	-0.7	0.4	0.1
9	P17	23.9	-0.9	-0.2	-1.0
9	P18	22.8	-0.3	-0.2	0.0
9	P19	22.4	-0.2	0.3	0.3
9	P20	22.6	-0.5	0.0	-0.2
9	P21	22.2	-0.7	0.4	0.0
9	P22	22.2	-0.1	0.9	0.2
9	P23	22.6	0.1	1.8	1.8
9	P24	22.3	0.5	1.4	0.7

DATA Continued**LLCR Gas Tight:**

	mOhm values	Actual	Delta
Board	Position	Initial	Gas Tight
1	P1	22.2	0.2
1	P2	21.6	0.2
1	P3	21.5	0.1
1	P4	22.2	0.2
1	P5	21.8	-0.2
1	P6	22.2	0.3
1	P7	21.5	0.1
1	P8	21.5	0.4
1	P9	22.3	-0.2
1	P10	21.6	-0.3
1	P11	21.4	0.5
1	P12	22.4	-0.2
1	P13	21.0	0.0
1	P14	20.8	0.7
1	P15	21.7	-0.2
1	P16	22.1	-0.3
1	P17	21.6	0.0
1	P18	21.2	0.2
1	P19	21.2	0.6
1	P20	20.6	0.9
1	P21	21.0	0.8
1	P22	22.1	0.6
1	P23	21.8	0.6
1	P24	21.7	1.3
2	P1	22.8	0.3
2	P2	21.7	0.9
2	P3	21.2	0.7
2	P4	21.9	0.3
2	P5	22.3	0.5
2	P6	21.5	0.4
2	P7	22.4	0.4
2	P8	22.5	0.1
2	P9	22.2	0.2
2	P10	22.5	0.8
2	P11	22.6	0.2
2	P12	22.5	0.4
2	P13	22.2	0.5
2	P14	22.7	0.5
2	P15	22.1	0.3
2	P16	22.2	0.3
2	P17	23.1	-0.1
2	P18	23.0	-0.1
2	P19	22.1	0.1

2	P20	21.2	0.5
2	P21	21.5	-0.1
2	P22	22.2	0.3
2	P23	22.1	0.0
2	P24	23.0	0.5
3	P1	21.7	0.1
3	P2	21.4	0.5
3	P3	21.6	0.1
3	P4	21.4	1.2
3	P5	21.4	0.3
3	P6	21.8	0.3
3	P7	21.5	0.1
3	P8	21.6	-0.1
3	P9	21.8	-0.3
3	P10	21.3	0.0
3	P11	21.4	0.7
3	P12	22.0	-0.2
3	P13	21.7	0.1
3	P14	21.8	0.1
3	P15	22.4	-0.5
3	P16	22.1	-0.3
3	P17	22.0	1.6
3	P18	21.7	0.1
3	P19	21.2	0.9
3	P20	20.7	0.2
3	P21	20.5	0.4
3	P22	21.0	0.4
3	P23	21.5	0.5
3	P24	21.1	0.6
4	P1	22.4	-0.2
4	P2	22.0	0.5
4	P3	22.1	0.7
4	P4	21.7	0.6
4	P5	22.2	-0.2
4	P6	22.1	-0.1
4	P7	23.5	-0.5
4	P8	22.5	-0.5
4	P9	23.0	0.4
4	P10	22.1	1.8
4	P11	22.4	0.3
4	P12	23.3	0.1
4	P13	22.1	1.3
4	P14	22.6	0.0
4	P15	23.2	0.3
4	P16	23.4	-0.4
4	P17	23.0	0.9
4	P18	22.9	0.5
4	P19	23.1	0.2
4	P20	22.1	0.1

Part description: LSHM

4	P21	21.2	0.0
4	P22	22.2	-0.1
4	P23	22.1	0.5
4	P24	22.4	-0.5
5	P1	23.0	0.9
5	P2	21.7	1.4
5	P3	23.0	-1.1
5	P4	22.2	1.2
5	P5	22.0	0.6
5	P6	21.6	1.1
5	P7	22.7	1.1
5	P8	23.1	-1.5
5	P9	23.2	-0.4
5	P10	23.3	-1.1
5	P11	22.8	0.0
5	P12	23.2	-0.5
5	P13	23.9	-0.3
5	P14	23.8	0.2
5	P15	22.9	1.6
5	P16	23.0	-0.3
5	P17	23.4	-1.3
5	P18	23.0	-0.6
5	P19	22.8	0.9
5	P20	22.3	-1.1
5	P21	21.2	0.3
5	P22	21.9	0.6
5	P23	23.3	-0.3
5	P24	21.9	0.8
6	P1	22.7	0.1
6	P2	22.2	0.5
6	P3	22.1	-0.3
6	P4	22.2	0.1
6	P5	21.8	0.4
6	P6	22.4	-0.3
6	P7	21.9	1.1
6	P8	21.4	0.0
6	P9	22.0	0.4
6	P10	22.5	-0.2
6	P11	22.2	0.4
6	P12	22.8	-0.1
6	P13	22.7	0.3
6	P14	22.6	0.9
6	P15	22.7	0.3
6	P16	22.8	-0.1
6	P17	21.8	0.3
6	P18	22.3	-0.1
6	P19	22.2	0.9
6	P20	21.5	0.6
6	P21	20.9	0.4

6	P22	22.1	0.7
6	P23	22.6	0.2
6	P24	22.3	0.4
7	P1	23.1	0.0
7	P2	22.8	0.3
7	P3	23.0	-0.1
7	P4	22.5	0.9
7	P5	23.1	0.1
7	P6	23.7	-0.2
7	P7	22.7	0.1
7	P8	22.3	1.0
7	P9	23.2	0.8
7	P10	23.1	0.2
7	P11	22.5	1.1
7	P12	23.2	-0.2
7	P13	23.0	0.5
7	P14	23.4	0.7
7	P15	22.7	1.1
7	P16	23.3	0.4
7	P17	23.2	1.0
7	P18	23.3	0.6
7	P19	22.4	0.1
7	P20	22.5	0.3
7	P21	21.9	1.0
7	P22	23.5	0.3
7	P23	22.8	0.8
7	P24	23.0	0.3
8	P1	22.9	1.4
8	P2	23.2	1.0
8	P3	22.9	1.0
8	P4	22.2	0.7
8	P5	22.2	1.6
8	P6	22.4	1.1
8	P7	22.5	1.5
8	P8	22.3	0.5
8	P9	22.1	0.5
8	P10	22.9	0.4
8	P11	22.4	1.0
8	P12	22.1	1.1
8	P13	21.7	1.4
8	P14	22.1	1.0
8	P15	22.4	1.2
8	P16	27.0	-2.5
8	P17	21.7	3.5
8	P18	23.2	0.4
8	P19	22.1	1.4
8	P20	20.5	0.6
8	P21	21.7	1.5
8	P22	22.5	-0.4

8	P23	23.1	-0.9
8	P24	23.5	0.3
9	P1	23.1	-0.2
9	P2	22.9	-0.1
9	P3	22.4	-0.3
9	P4	21.9	-0.1
9	P5	22.3	-0.1
9	P6	22.4	-0.3
9	P7	22.2	0.3
9	P8	22.7	-0.3
9	P9	21.7	-0.1
9	P10	22.4	0.0
9	P11	22.1	0.1
9	P12	22.0	0.0
9	P13	21.6	0.2
9	P14	22.1	0.1
9	P15	22.4	-0.4
9	P16	22.3	-0.1
9	P17	22.8	0.1
9	P18	22.4	-0.6
9	P19	21.9	0.0
9	P20	20.9	0.1
9	P21	21.4	-0.2
9	P22	21.7	0.2
9	P23	22.1	1.4
9	P24	22.5	-0.3

EQUIPMENT AND CALIBRATION SCHEDULES**Equipment #:** HZ-MO-03**Description:** Micro-ohmmeter**Manufacturer:** Keithley**Model:** 580**Serial #:** 297288**Accuracy:** «Equipment_List_1_Accuracy1» «Equipment_List_1_Accuracy2»

... Last Cal: 7/22/2008, Next Cal: 7/21/2009

Equipment #: HZ-MO-02**Description:** Digital Multimeter**Manufacturer:** Keithley**Model:** 2700**Serial #:** 1192950**Accuracy:** «Equipment_List_2_Accuracy1» «Equipment_List_2_Accuracy2»

... Last Cal: 12/15/2008, Next Cal: 12/14/2009

Equipment #: HZ-PS-01**Description:** 120 Amp Power Supply**Manufacturer:** Agilent**Model:** Agilent 6031A PS**Serial #:** MY41000982**Accuracy:** «Equipment_List_3_Accuracy1» «Equipment_List_3_Accuracy2»

... Last Cal: 4/29/2009, Next Cal: 4/28/2010

Equipment #: HZ-MO-01**Description:** Digital Multimeter**Manufacturer:** Keithley 2700**Model:** 2700**Serial #:** 1199807**Accuracy:** «Equipment_List_4_Accuracy1» «Equipment_List_4_Accuracy2»

... Last Cal: 4/29/2009, Next Cal: 4/28/2010

Equipment #: HZ-HPM-01**Description:** IR/DWV Tester**Manufacturer:** Ainuo**Model:** AN9636H**Serial #:** 089601091**Accuracy:** «Equipment_List_5_Accuracy1» «Equipment_List_5_Accuracy2»

... Last Cal: 3/4/2009, Next Cal: 3/3/2010

Equipment #: HZ-TCT-01**Description:** Normal force analyzer**Manufacturer:** Mecmesin Multitester**Model:** Mecmesin Multitester 2.5-i**Serial #:** 08-1049-04**Accuracy:** «Equipment_List_6_Accuracy1» «Equipment_List_6_Accuracy2»

... Last Cal: 4/29/2009, Next Cal: 4/28/2010

EQUIPMENT AND CALIBRATION SCHEDULES Continued**Equipment #:** HZ-OV-01**Description:** Oven**Manufacturer:** Huida**Model:** CS101-1E**Serial #:** CS101-1E-B**Accuracy:** Last Cal: 12/15/2009, Next Cal: 12/14/2010**Equipment #:** HZ-THC-01**Description:** Humidity transmitter**Manufacturer:** Thermtron**Model:** HMM30C**Serial #:** D0240037**Accuracy:** Last Cal: 3/4/2009, Next Cal: 3/3/2010