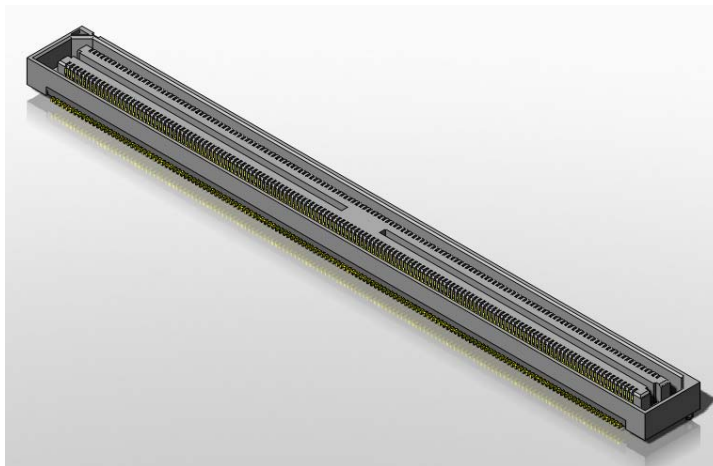
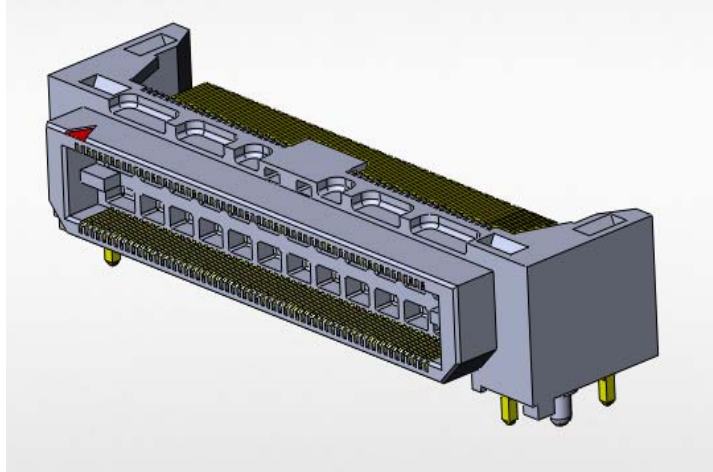




Project Number: Design Qualification Test Report		Tracking Code: 166544_Report_Rev_2	
Requested by: Leo Lee		Date: 4/23/2019	Product Rev: 0
Part #: BTH-060-01-L-D-RA-WT\ BSH-060-01-L-D		Lot #: N/A	Tech: Peter Chen Eng: Vico Zhao
Part description: BTH/BSH			Qty to test: 36
Test Start: 10/16/2011	Test Completed: 11/1/2011		



**Design Qualification Test Report**

**BTH/BSH**

**BTH-060-01-L-D-RA-WT\ BSH-060-01-L-D**

## 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.

All contents contained herein are the property of Samtec. No portion of this report, in part or in full shall be reproduced without prior written approval of Samtec.

### 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 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 are visually inspected and cleaned if necessary.
- 7) Any additional preparation will be noted in the individual test sequences.
- 8) Solder Information: Lead free

**FLOWCHARTS****Gas Tight**

TEST STEP	GROUP A1 192 Points
01	LLCR-1
02	Gas Tight
03	LLCR-2

Gas Tight = EIA-364-36A

LLCR = EIA-364-23, LLCR

20 mV Max, 100 mA Max

Use Keithley 580 or 3706 in 4 wire dry circuit mode

**Thermal Aging**

TEST STEP	GROUP A1 8 Boards Thermal Aging (Mated)
01	Contact Gaps
02	Forces - Mating / Unmating
03	LLCR-1
04	Thermal Aging (Mated and Undisturbed)
05	LLCR-2
06	Forces - Mating / Unmating
07	Contact Gaps

Thermal Aging = EIA-364-17, Test Condition 4 (105°C)

Time Condition 'B' (250 Hours)

Mating / Unmating Forces = EIA-364-13

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

Gaps to be taken on a minimum of 20% of each part tested

LLCR = EIA-364-23, LLCR

20 mV Max, 100 mA Max

Use Keithley 580 or 3706 in 4 wire dry circuit mode

**FLOWCHARTS Continued**

**Mating/Unmating Basic**

TEST STEP	GROUP A1 8 Boards BTH-060-01-L-D/BSH-060-01-L-D-A	GROUP A2 8 Boards BTH-060-01-L-D-RA-WT\ BSH-060-01-L-D
<b>01</b>	Force- Mating / Unmating	Force- Mating / Unmating
<b>02</b>	25 Cycles	25 Cycles
<b>03</b>	Force- Mating / Unmating	Force- Mating / Unmating
<b>04</b>	25 Cycles (Total 50 cycles)	25 Cycles (Total 50 cycles)
<b>05</b>	Force- Mating / Unmating	Force- Mating / Unmating
<b>06</b>	25 Cycles (Total 75 cycles)	25 Cycles (Total 75 cycles)
<b>07</b>	Force- Mating / Unmating	Force- Mating / Unmating
<b>08</b>	25 Cycles (Total 100 cycles)	25 Cycles (Total 100 cycles)

**Mechanical Shock / Vibration / LLCR**

TEST STEP	GROUP A1 192 Points
<b>01</b>	LLCR-1
<b>02</b>	Shock
<b>03</b>	Vibration
<b>04</b>	LLCR-2

**Mechanical Shock = EIA 364-27 Half Sine,**  
100 g's, 6 milliSeconds (Condition "C") each axis

**Vibration = EIA 364-28, Random Vibration**  
7.56 g RMS, Condition VB --- 2 hours/axis

**LLCR = EIA-364-23, LLCR**  
20 mV Max, 100 mA Max  
Use Keithley 580 or 3706 in 4 wire dry circuit mode

**FLOWCHARTS Continued****Shock / Vibration / nanoSecond Event Detection**

<b>TEST STEP</b>	<b>GROUP A1 60 Points</b>
<b>01</b>	Event Detection, Shock
<b>02</b>	Event Detection, Vibration

**Mechanical Shock = EIA 364-27 Half Sine,**

**100 g's, 6 milliSeconds (Condition "C") each axis**

**Vibration = EIA 364-28, Random Vibration**

**7.56 g RMS, Condition VB --- 2 hours/axis**

**Event detection requirement during Shock / Vibration is 50 nanoseconds minimum**

## ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

### THERMAL:

- EIA-364-17, *Temperature Life with or without Electrical Load Test Procedure for Electrical Connectors*.
- Test Condition 4 at 105° C.
- Test Time Condition B for 250 hours.
- All test samples are pre-conditioned at ambient.
- All test samples are exposed to environmental stressing in the mated condition.

### MECHANICAL SHOCK (Specified Pulse):

- 1) Reference document: EIA-364-27, *Mechanical Shock Test Procedure for Electrical Connectors*
- 2) Test Condition C
- 3) Peak Value: 100 G
- 4) Duration: 6 Milliseconds
- 5) Wave Form: Half Sine
- 6) Velocity: 12.3 ft/s
- 7) Number of Shocks: 3 Shocks / Direction, 3 Axis (18 Total)

### VIBRATION:

- 1) Reference document: EIA-364-28, *Vibration Test Procedure for Electrical Connectors*
- 2) Test Condition V, Letter B
- 3) Power Spectral Density: 0.04 G<sup>2</sup> / Hz
- 4) G 'RMS': 7.56
- 5) Frequency: 50 to 2000 Hz
- 6) Duration: 2.0 Hours per axis (3 axis total)

### NANOSECOND-EVENT DETECTION:

- 1) Reference document: EIA-364-87, *Nanosecond-Event Detection for Electrical Connectors*
- 2) Prior to test, the samples were characterized to assure the low nanosecond event being monitored will trigger the detector.
- 3) After characterization it was determined the test samples could be monitored for 50 nanosecond events

### 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.

**ATTRIBUTE DEFINITIONS**

The following is a brief, simplified description of attributes.

**LLCR:**

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

**GAS TIGHT:**

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

- 1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 3) The following guidelines are used to categorize the changes in LLCR as a result from stressing
  - a.  $\leq +5.0$  mOhms: ----- Stable
  - b.  $+5.1$  to  $+10.0$  mOhms: ----- Minor
  - c.  $+10.1$  to  $+15.0$  mOhms: ----- Acceptable
  - d.  $+15.1$  to  $+50.0$  mOhms: ----- Marginal
  - e.  $+50.1$  to  $+2000$  mOhms: ----- Unstable
  - f.  $>+2000$  mOhms:----- Open Failure
- 4) Procedure:
  - a. Reference document: EIA-364-36, *Test Procedure for Determination of Gas-Tight Characteristics for Electrical Connectors, Sockets and/or Contact Systems*.
  - b. Test Conditions:
    - i. Class II--- Mated pairs of contacts assembled to their plastic housings.
    - ii. Reagent grade Nitric Acid shall be used of sufficient volume to saturate the test chamber
    - iii. The ratio of the volume of the test chamber to the surface area of the acid shall be 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  $50^{\circ}$  C
    - ix. The final LLCR shall be conducted within 1 hour after drying.

**RESULTS****Contact Gaps****Thermal aging****BTH**

- **Initial**
  - **Min**----- 0.1449 inch
  - **Max**----- 0.1535 inch
- **After thermal aging**
  - **Min**----- 0.1508 inch
  - **Max**----- 0.1608 inch

**Mating & unmating force****Mating/Unmating basic (BTH-060-01-L-D/BSH-060-01-L-D-A):**

- **Initial**
  - **Mating**
    - **Min**----- 7.32 Lbs
    - **Max**----- 9.89 Lbs
  - **Unmating**
    - **Min**----- 4.27 Lbs
    - **Max**----- 7.10 Lbs
- **After 25 Cycles**
  - **Mating**
    - **Min**----- 7.78 Lbs
    - **Max**----- 9.70 Lbs
  - **Unmating**
    - **Min**----- 4.22 Lbs
    - **Max**----- 7.36 Lbs
- **After 50 Cycles**
  - **Mating**
    - **Min**----- 7.46 Lbs
    - **Max**----- 10.08 Lbs
  - **Unmating**
    - **Min**----- 4.51 Lbs
    - **Max**----- 7.83 Lbs
- **After 75 Cycles**
  - **Mating**
    - **Min**----- 8.17 Lbs
    - **Max**----- 10.85 Lbs
  - **Unmating**
    - **Min**----- 4.60 Lbs
    - **Max**----- 8.74 Lbs
- **After 100 Cycles**
  - **Mating**
    - **Min**----- 8.68 Lbs
    - **Max**----- 11.30 Lbs
  - **Unmating**
    - **Min**----- 4.87 Lbs
    - **Max**----- 9.52 Lbs

**RESULTS Continued****Mating/Unmating basic (BTH-060-01-L-D-RA-WT/BSH-060-01-L-D):**

- **Initial**
  - **Mating**
    - **Min** ----- 8.51 Lbs
    - **Max** ----- 9.89 Lbs
  - **Unmating**
    - **Min** ----- 4.25 Lbs
    - **Max** ----- 6.45 Lbs
- **After 25 Cycles**
  - **Mating**
    - **Min** ----- 9.64 Lbs
    - **Max** ----- 12.37 Lbs
  - **Unmating**
    - **Min** ----- 5.12 Lbs
    - **Max** ----- 7.36 Lbs
- **After 50 Cycles**
  - **Mating**
    - **Min** ----- 10.19 Lbs
    - **Max** ----- 12.89 Lbs
  - **Unmating**
    - **Min** ----- 5.45 Lbs
    - **Max** ----- 7.53 Lbs
- **After 75 Cycles**
  - **Mating**
    - **Min** ----- 10.28 Lbs
    - **Max** ----- 13.52 Lbs
  - **Unmating**
    - **Min** ----- 5.56 Lbs
    - **Max** ----- 7.49 Lbs
- **After 100 Cycles**
  - **Mating**
    - **Min** ----- 10.72 Lbs
    - **Max** ----- 13.71 Lbs
  - **Unmating**
    - **Min** ----- 5.60 Lbs
    - **Max** ----- 7.51 Lbs

**Thermal aging**

- **Initial**
  - **Mating**
    - **Min** ----- 6.49 Lbs
    - **Max** ----- 8.66 Lbs
  - **Unmating**
    - **Min** ----- 4.45 Lbs
    - **Max** ----- 6.57 Lbs
- **After thermal aging**
  - **Mating**
    - **Min** ----- 2.81 Lbs
    - **Max** ----- 4.13 Lbs
  - **Unmating**
    - **Min** ----- 2.06 Lbs
    - **Max** ----- 3.63 Lbs

**RESULTS Continued****LLCR Thermal Aging (192 pin LLCR test points)**

- **Initial**----- 34.0 mOhms Max
- **Thermal Aging**
  - **<= +5.0 mOhms**----- 146 Points----- Stable
  - **+5.1 to +10.0 mOhms**----- 46 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 (192 pin LLCR test points)**

- **Initial**----- 29.9 mOhms Max
- **Gas-Tight**
  - **<= +5.0 mOhms**----- 191 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

**LLCR Shock Vib (192 pin LLCR test points)**

- **Initial**----- 28.3 mOhms Max
- **S&V**
  - **<= +5.0 mOhms**----- 192 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

**Mechanical Shock & Random Vibration:**

- **Shock**
  - **No Damage**----- Passed
  - **50 Nanoseconds**----- Passed
- **Vibration**
  - **No Damage**----- Passed
  - **50 Nanoseconds**----- Passed

**DATA SUMMARIES****CONTACT GAPS:****Thermal aging:  
BTH**

Initial		After Thermal	
Units:	inches	Units:	inches
<i>Minimum</i>	0.1449	<i>Minimum</i>	0.1508
<i>Maximum</i>	0.1535	<i>Maximum</i>	0.1608
<i>Average</i>	0.1510	<i>Average</i>	0.1553
<i>St. Dev.</i>	0.0010	<i>St. Dev.</i>	0.0035
<i>Count</i>	80	<i>Count</i>	80

**Mating & unmating force****Mating/Unmating basic (BTH-060-01-L-D/BSH-060-01-L-D-A)**

	Initial				After 25 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)
Minimum	32.56	7.32	18.99	4.27	34.61	7.78	18.77	4.22
Maximum	43.99	9.89	31.58	7.10	43.15	9.70	32.74	7.36
<b>Average</b>	38.63	<b>8.68</b>	24.67	<b>5.55</b>	39.20	<b>8.81</b>	25.35	<b>5.70</b>
St Dev	3.91	0.88	4.07	0.92	2.71	0.61	4.95	1.11
Count	8	8	8	8	8	8	8	8
	After 50 Cycles				After 75 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)
Minimum	33.18	7.46	20.06	4.51	36.34	8.17	20.46	4.60
Maximum	44.84	10.08	34.83	7.83	48.26	10.85	38.88	8.74
<b>Average</b>	40.47	<b>9.10</b>	26.72	<b>6.01</b>	42.52	<b>9.56</b>	28.35	<b>6.37</b>
St Dev	3.69	0.83	4.74	1.07	3.55	0.80	5.57	1.25
Count	8	8	8	8	8	8	8	8
	After 100 Cycles							
	Mating		Unmating					
	Newton	Force (Lbs)	Newton	Force (Lbs)				
Minimum	38.61	8.68	21.66	4.87				
Maximum	50.26	11.30	42.34	9.52				
<b>Average</b>	43.99	<b>9.89</b>	29.41	<b>6.61</b>				
St Dev	3.91	0.88	6.09	1.37				
Count	8	8	8	8				

**DATA SUMMARIES Continued**

**Mating/Unmating basic (BTH-060-01-L-D-RA-WT/BSH-060-01-L-D)**

	Initial				After 25 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton's	Force (Lbs)	Newton's	Force (Lbs)	Newton's	Force (Lbs)	Newton's	Force (Lbs)
Minimum	37.85	8.51	18.90	4.25	42.88	9.64	22.77	5.12
Maximum	43.99	9.89	28.69	6.45	55.02	12.37	32.74	7.36
<b>Average</b>	40.53	<b>9.11</b>	22.97	<b>5.17</b>	48.92	<b>11.00</b>	26.37	<b>5.93</b>
St Dev	2.06	0.46	3.41	0.77	4.63	1.04	3.33	0.75
Count	8	8	8	8	8	8	8	8

	After 50 Cycles				After 75 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton's	Force (Lbs)	Newton's	Force (Lbs)	Newton's	Force (Lbs)	Newton's	Force (Lbs)
Minimum	45.33	10.19	24.24	5.45	45.73	10.28	24.73	5.56
Maximum	57.33	12.89	33.49	7.53	60.14	13.52	33.32	7.49
<b>Average</b>	51.87	<b>11.66</b>	27.37	<b>6.15</b>	53.60	<b>12.05</b>	27.93	<b>6.28</b>
St Dev	4.47	1.00	3.13	0.70	4.92	1.11	2.94	0.66
Count	8	8	8	8	8	8	8	8

	After 100 Cycles			
	Mating		Unmating	
	Newton's	Force (Lbs)	Newton's	Force (Lbs)
Minimum	47.68	10.72	24.91	5.60
Maximum	60.98	13.71	33.40	7.51
<b>Average</b>	54.66	<b>12.29</b>	28.37	<b>6.38</b>
St Dev	4.79	1.08	2.88	0.65
Count	8	8	8	8

**Thermal aging:**

	Initial				After Thermals			
	Mating		Unmating		Mating		Unmating	
	Newton's	Force (Lbs)	Newton's	Force (Lbs)	Newton's	Force (Lbs)	Newton's	Force (Lbs)
Minimum	28.87	6.49	19.79	4.45	12.50	2.81	9.16	2.06
Maximum	38.52	8.66	29.22	6.57	18.37	4.13	16.15	3.63
<b>Average</b>	34.46	<b>7.75</b>	22.78	<b>5.12</b>	14.90	<b>3.35</b>	12.29	<b>2.76</b>
St Dev	3.34	0.75	3.00	0.67	1.91	0.43	2.31	0.52
Count	8	8	8	8	8	8	8	8

**S&V Event Detection**

<b>Shock and Vibration Event Detection Summary</b>	
Contacts tested	60
Test Condition	C, 100g's, 6ms, Half-Sine
Shock Events	0
Test Condition	V-B, 7.56 rms g
Vibration Events	0
<b>Total Events</b>	<b>0</b>

**DATA SUMMARIES Continued**

**LLCR thermal aging**

- 1) A total of 192 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	10/16/2011	10/27/2011
Room Temp C	23	24
RH	50	52
Name	Peter Chen	Peter Chen
<b>mOhm values</b>	<b>Actual</b>	<b>Delta</b>
	<b>Initial</b>	<b>Thermal Age</b>
Average	27.6	3.5
St. Dev.	2.5	2.2
Min	22.7	-4.0
Max	34.0	9.4
Count	192	192

<b>How many samples are being tested?</b>	<b><u>8</u></b>
<b>How many contacts are on each board?</b>	<b><u>24</u></b>

	Stable	Minor	Acceptable	Marginal	Unstable	Open
<b>Thermal Age</b>	146	46	0	0	0	0

**DATA SUMMARIES Continued**

**LLCR GAS TIGHT:**

- 1) A total of 192 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	10/29/2011	11/1/2011
Room Temp C	23	23
RH	54	54
Name	Peter Chen	Peter Chen
<b>mOhm values</b>	<b>Actual</b>	<b>Delta</b>
	<b>Initial</b>	<b>Gas Tight</b>
Average	25.8	1.1
St. Dev.	1.6	0.9
Min	22.6	0.0
Max	29.9	6.3
Count	192	192

<b>How many samples are being tested?</b>	<b><u>8</u></b>
<b>How many contacts are on each board?</b>	<b><u>24</u></b>

	Stable	Minor	Acceptable	Marginal	Unstable	Open
<b>Gas Tight</b>	191	1	0	0	0	0

**DATA SUMMARIES Continued**

**LLCR S&V:**

- 1) A total of 192 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	12/7/2011	12/9/2011
Room Temp C	22	23
RH	29	28
Name	Tony Wagoner	Tony Wagoner
mOhm values	<b>Actual</b>	<b>Delta</b>
	<b>Initial</b>	<b>Shock-Vib</b>
Average	25.6	0.6
St. Dev.	1.6	0.5
Min	22.8	0.0
Max	28.3	3.9
Count	192	192

<b>How many samples are being tested?</b>	<b><u>8</u></b>
<b>How many contacts are on each board?</b>	<b><u>24</u></b>

	Stable	Minor	Acceptable	Marginal	Unstable	Open
<b>Shock / Vibe</b>	192	0	0	0	0	0

**EQUIPMENT AND CALIBRATION SCHEDULES****Equipment #:** HZ-MO-03**Description:** Micro-ohmmeter**Manufacturer:** Keithley**Model:** 580**Serial #:** 297288**Accuracy:** Last Cal: 2011-8-06, Next Cal: 2012-8-05**Equipment #:** HZ- TCT-01**Description:** Normal force analyzer**Manufacturer:** Mecmesin Multitester**Model:** Mecmesin Multitester 2.5-i**Serial #:** 08-1049-04**Accuracy:** Last Cal: 2011-4-28, Next Cal: 2012-4-27**Equipment #:** HZ- OV-01**Description:** Oven**Manufacturer:** Huida**Model:** CS101-1E**Serial #:** CS101-1E-B**Accuracy:** Last Cal: 2011-12-14, Next Cal: 2012-12-13**Equipment #:** HZ- OGP-01**Description:** Video measurement system**Manufacturer:** OGP**Model:** SMARTSCOPE FLASH 200**Serial #:** SVW2003632**Accuracy:** Last Cal: 2011-6-10, Next Cal: 2012-6-9**Equipment #:** HZ- MO-01**Description:** Micro-ohmmeter**Manufacturer:** Keithley**Model:** 2700**Serial #:** 1199807**Accuracy:** Last Cal: 2011-4-28, Next Cal: 2012-4-27**Equipment #:** ACLM-01**Description:** Accelerometer**Manufacturer:** PCB Piezotronics**Model:** 352C03**Serial #:** 115819**Accuracy:** See Manual

... Last Cal: 2011-07-9, Next Cal: 2012-7-9

**EQUIPMENT AND CALIBRATION SCHEDULES****Equipment #:** ED-03**Description:** Event Detector**Manufacturer:** Analysis Tech**Model:** 32EHD**Serial #:** 1100604**Accuracy:** See Manual

... Last Cal: 2011-06-4, Next Cal: 2012-06-4

**Equipment #:** SVC-01**Description:** Shock & Vibration Table**Manufacturer:** Data Physics**Model:** LE-DSA-10-20K**Serial #:** 10037**Accuracy:** See Manual

... Last Cal: 2011-11-31, Next Cal: 2012-12-31