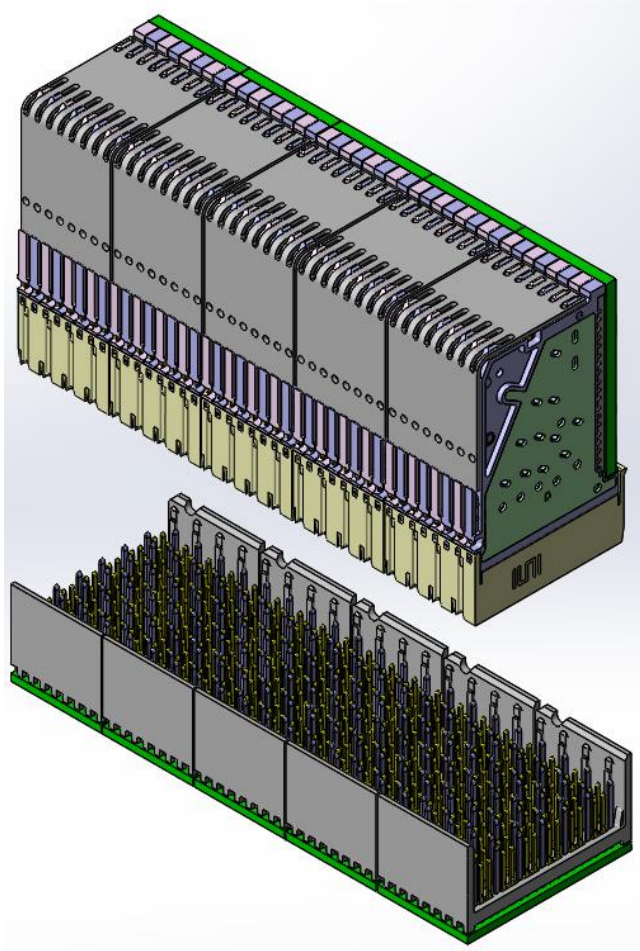




Project Number: Design Qualification Test Report	Tracking Code: 1922156_Report_Rev_1
Requested by: Corey Rose	Date: 12/16/2019
Part #: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1/AX610-00218/923-600E-30D	
Part description: HDTF/HDTM (5 connectors per test board)	Tech: Tony Wagoner
Test Start: 9/18/2019	Test Completed: 11/1/2019



**DESIGN QUALIFICATION TEST REPORT**  
**HDTF/HDTM**  
**HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1**  
**AMPHENOL: AX610-00218/923-600E-30D**  
**(FIVE CONNECTORS MOUNTED PER TEST BOARD)**

Tracking Code: 1922156_Report_Rev_1	Part #: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1/ AX610-00218/923-600E-30D
Part description: HDTF/HDTM (5 connectors per test board)	

**REVISION HISTORY**

<b>DATA</b>	<b>REV.NUM.</b>	<b>DESCRIPTION</b>	<b>ENG</b>
12/16/2019	1	Initial Issue	KH

## 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) Parts not intended for testing LLCR are visually inspected and cleaned if necessary.
- 4) Any additional preparation will be noted in the individual test sequences.
- 5) Samtec Test PCBs used: PCB-108451-TST/ PCB-108452-TST/ PCB-108453-TST

**FLOWCHARTS****Thermal Shock/Humidity/Dust/Durability**

<u>Group 1</u>		<u>Group 2</u>		<u>Group 3</u>		<u>Group 4</u>	
HDTF-6-08-S-RA-HS-100 HDTM-6-08-1-S-VT-0-1 200 Points Samtec -RA Mated To Samtec -VT		AX610-00218 HDTM-6-08-1-S-VT-0-1 200 Points Amphenol -RA Mated To Samtec -VT		HDTF-6-08-S-RA-HS-100 923-600E-30D 200 Points Samtec -RA Mated To Amphenol -VT		AX610-00218 923-600E-30D 200 Points Amphenol -RA Mated To Amphenol -VT	
Step	Description	Step	Description	Step	Description	Step	Description
1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>
2.	Mating/Unmating Force (3) - Non Standard	2.	Mating/Unmating Force (3) - Non Standard	2.	Mating/Unmating Force (3) - Non Standard	2.	Mating/Unmating Force (3) - Non Standard
3.	LLCR (2)	3.	LLCR (2)	3.	LLCR (2)	3.	LLCR (2)
4.	Cycles Quantity = 250 Cycles	4.	Cycles Quantity = 250 Cycles	4.	Cycles Quantity = 250 Cycles	4.	Cycles Quantity = 250 Cycles
5.	LLCR (2) Max Delta = 10 mOhm	5.	LLCR (2) Max Delta = 10 mOhm	5.	LLCR (2) Max Delta = 10 mOhm	5.	LLCR (2) Max Delta = 10 mOhm
6.	Dust <i>Note: EIA-364-91 Composition 1 Benign, per section 9 GR-1217-CORE Telcordia</i>	6.	Dust <i>Note: EIA-364-91 Composition 1 Benign, per section 9 GR-1217-CORE Telcordia</i>	6.	Dust <i>Note: EIA-364-91 Composition 1 Benign, per section 9 GR-1217-CORE Telcordia</i>	6.	Dust <i>Note: EIA-364-91 Composition 1 Benign, per section 9 GR-1217-CORE Telcordia</i>
7.	LLCR (2) Max Delta = 10 mOhm	7.	LLCR (2) Max Delta = 10 mOhm	7.	LLCR (2) Max Delta = 10 mOhm	7.	LLCR (2) Max Delta = 10 mOhm
8.	Thermal Shock (4) - Non Standard	8.	Thermal Shock (4) - Non Standard	8.	Thermal Shock (4) - Non Standard	8.	Thermal Shock (4) - Non Standard
9.	LLCR (2) Max Delta = 10 mOhm	9.	LLCR (2) Max Delta = 10 mOhm	9.	LLCR (2) Max Delta = 10 mOhm	9.	LLCR (2) Max Delta = 10 mOhm
10.	Humidity (1) - Non Standard	10.	Humidity (1) - Non Standard	10.	Humidity (1) - Non Standard	10.	Humidity (1) - Non Standard
11.	LLCR (2) Max Delta = 10 mOhm	11.	LLCR (2) Max Delta = 10 mOhm	11.	LLCR (2) Max Delta = 10 mOhm	11.	LLCR (2) Max Delta = 10 mOhm
12.	Mating/Unmating Force (3) - Non Standard	12.	Mating/Unmating Force (3) - Non Standard	12.	Mating/Unmating Force (3) - Non Standard	12.	Mating/Unmating Force (3) - Non Standard

**(1) Humidity = Other**

Test Condition = C (500 Hours)  
Test Method = III (+25°C to +65°C @ 80% RH to 98% RH)  
EIA-364-31C minimum 50 cycles and minimum 500 hours.

**(2) LLCR = EIA-364-23**

Open Circuit Voltage = 20 mV Max  
Test Current = 100 mA Max

**(3) Mating/Unmating Force = Other**

EIA-364-13 rate of 0.5" per minute

**(4) Thermal Shock = Other**

Exposure Time at Temperature Extremes = 1/2 Hour  
Method A, Test Condition = II (-65°C to +105°C)  
Test Duration = (5 Cycles)  
EIA-364-TP32B

**FLOWCHARTS Continued****Temperature Life**

<u>Group 1</u>		<u>Group 2</u>		<u>Group 3</u>		<u>Group 4</u>	
HDTF-6-08-S-RA-HS-100		AX610-00218		HDTF-6-08-S-RA-HS-100		AX610-00218	
HDTM-6-08-1-S-VT-0-1		HDTM-6-08-1-S-VT-0-1		923-600E-30D		923-600E-30D	
200 Points		200 Points		200 Points		200 Points	
Samtec -RA Mated To Samtec -VT		Amphenol -RA Mated To Samtec -VT		Samtec -RA Mated To Amphenol -VT		Amphenol -RA Mated To Amphenol -VT	
Step	Description	Step	Description	Step	Description	Step	Description
1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>
2.	Mating/Unmating Force (2) - Non Standard	2.	Mating/Unmating Force (2) - Non Standard	2.	Mating/Unmating Force (2) - Non Standard	2.	Mating/Unmating Force (2) - Non Standard
3.	LLCR (1)	3.	LLCR (1)	3.	LLCR (1)	3.	LLCR (1)
4.	Thermal Age (3) - Non Standard	4.	Thermal Age (3) - Non Standard	4.	Thermal Age (3) - Non Standard	4.	Thermal Age (3) - Non Standard
5.	LLCR (1) Max Delta = 10 mOhm	5.	LLCR (1) Max Delta = 10 mOhm	5.	LLCR (1) Max Delta = 10 mOhm	5.	LLCR (1) Max Delta = 10 mOhm
6.	Mating/Unmating Force (2) - Non Standard	6.	Mating/Unmating Force (2) - Non Standard	6.	Mating/Unmating Force (2) - Non Standard	6.	Mating/Unmating Force (2) - Non Standard

(1) LLCR = EIA-364-23

Open Circuit Voltage = 20 mV Max  
Test Current = 100 mA Max

(2) Mating/Unmating Force = Other

EIA-364-13 rate of 0.5" per minute.

(3) Thermal Age = Other

Test Condition = 4 (105°C)  
Time Condition = A (1000 Hours)  
EIA-364-17

**FLOWCHARTS Continued****Vibration And Mechanical Shock With Durability**

<u>Group 1</u>		<u>Group 2</u>		<u>Group 3</u>		<u>Group 4</u>	
HDTF-6-08-S-RA-HS-100 HDTM-6-08-1-S-VT-0-1 200 Points Samtec -RA Mated To Samtec -VT		AX610-00218 HDTM-6-08-1-S-VT-0-1 200 Points Amphenol -RA Mated To Samtec -VT		HDTF-6-08-S-RA-HS-100 923-600E-30D 200 Points Samtec -RA Mated To Amphenol -VT		AX610-00218 923-600E-30D 200 Points Amphenol -RA Mated To Amphenol -VT	
Step	Description	Step	Description	Step	Description	Step	Description
1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>	1.	Visual Inspection <i>Note: Check for lifted beams.</i>
2.	Mating/Unmating Force (2) - Non Standard	2.	Mating/Unmating Force (2) - Non Standard	2.	Mating/Unmating Force (2) - Non Standard	2.	Mating/Unmating Force (2) - Non Standard
3.	LLCR (1)	3.	LLCR (1)	3.	LLCR (1)	3.	LLCR (1)
4.	Cycles Quantity = 100 Cycles	4.	Cycles Quantity = 100 Cycles	4.	Cycles Quantity = 100 Cycles	4.	Cycles Quantity = 100 Cycles
5.	LLCR (1) Max Delta = 10 mOhm	5.	LLCR (1) Max Delta = 10 mOhm	5.	LLCR (1) Max Delta = 10 mOhm	5.	LLCR (1) Max Delta = 10 mOhm
6.	Dust <i>Note: EIA-364-91 Coposition 1 Benign, per section 9 GR-1217-CORE Telcordia</i>	6.	Dust <i>Note: EIA-364-91 Coposition 1 Benign, per section 9 GR-1217-CORE Telcordia</i>	6.	Dust <i>Note: EIA-364-91 Coposition 1 Benign, per section 9 GR-1217-CORE Telcordia</i>	6.	Dust <i>Note: EIA-364-91 Coposition 1 Benign, per section 9 GR-1217-CORE Telcordia</i>
7.	LLCR (1) Max Delta = 10 mOhm	7.	LLCR (1) Max Delta = 10 mOhm	7.	LLCR (1) Max Delta = 10 mOhm	7.	LLCR (1) Max Delta = 10 mOhm
8.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On X axis.</i>	8.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On X axis.</i>	8.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On X axis.</i>	8.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On X axis.</i>
9.	LLCR (1) Max Delta = 10 mOhm	9.	LLCR (1) Max Delta = 10 mOhm	9.	LLCR (1) Max Delta = 10 mOhm	9.	LLCR (1) Max Delta = 10 mOhm
10.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On Y axis.</i>	10.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On Y axis.</i>	10.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On Y axis.</i>	10.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On Y axis.</i>
11.	LLCR (1) Max Delta = 10 mOhm	11.	LLCR (1) Max Delta = 10 mOhm	11.	LLCR (1) Max Delta = 10 mOhm	11.	LLCR (1) Max Delta = 10 mOhm
12.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On Z axis.</i>	12.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On Z axis.</i>	12.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On Z axis.</i>	12.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard <i>Note: On Z axis.</i>
13.	LLCR (1) Max Delta = 10 mOhm	13.	LLCR (1) Max Delta = 10 mOhm	13.	LLCR (1) Max Delta = 10 mOhm	13.	LLCR (1) Max Delta = 10 mOhm
14.	Nanosecond Event Detection (Random Vibration) (4) - Non Standard	14.	Nanosecond Event Detection (Random Vibration) (4) - Non Standard	14.	Nanosecond Event Detection (Random Vibration) (4) - Non Standard	14.	Nanosecond Event Detection (Random Vibration) (4) - Non Standard

**FLOWCHARTS Continued**

<p><i>Note: On X axis.</i></p> <p>15. LLCR (1) Max Delta = 10 mOhm</p> <p>16. Nanosecond Event Detection (Random Vibration) (4) - Non Standard <i>Note: On Y axis.</i></p> <p>17. LLCR (1) Max Delta = 10 mOhm</p> <p>18. Nanosecond Event Detection (Random Vibration) (4) - Non Standard <i>Note: On Z axis.</i></p> <p>19. LLCR (1) Max Delta = 10 mOhm</p> <p>20. Cycles Quantity = 100 Cycles</p> <p>21. Mating/Unmating Force (2) - Non Standard</p> <p>22. LLCR (1) Max Delta = 10 mOhm</p>	<p><i>Note: On X axis.</i></p> <p>15. LLCR (1) Max Delta = 10 mOhm</p> <p>16. Nanosecond Event Detection (Random Vibration) (4) - Non Standard <i>Note: On Y axis.</i></p> <p>17. LLCR (1) Max Delta = 10 mOhm</p> <p>18. Nanosecond Event Detection (Random Vibration) (4) - Non Standard <i>Note: On Z axis.</i></p> <p>19. LLCR (1) Max Delta = 10 mOhm</p> <p>20. Cycles Quantity = 100 Cycles</p> <p>21. Mating/Unmating Force (2) - Non Standard</p> <p>22. LLCR (1) Max Delta = 10 mOhm</p>	<p><i>Note: On X axis.</i></p> <p>15. LLCR (1) Max Delta = 10 mOhm</p> <p>16. Nanosecond Event Detection (Random Vibration) (4) - Non Standard <i>Note: On Y axis.</i></p> <p>17. LLCR (1) Max Delta = 10 mOhm</p> <p>18. Nanosecond Event Detection (Random Vibration) (4) - Non Standard <i>Note: On Z axis.</i></p> <p>19. LLCR (1) Max Delta = 10 mOhm</p> <p>20. Cycles Quantity = 100 Cycles</p> <p>21. Mating/Unmating Force (2) - Non Standard</p> <p>22. LLCR (1) Max Delta = 10 mOhm</p>	<p><i>Note: On X axis.</i></p> <p>15. LLCR (1) Max Delta = 10 mOhm</p> <p>16. Nanosecond Event Detection (Random Vibration) (4) - Non Standard <i>Note: On Y axis.</i></p> <p>17. LLCR (1) Max Delta = 10 mOhm</p> <p>18. Nanosecond Event Detection (Random Vibration) (4) - Non Standard <i>Note: On Z axis.</i></p> <p>19. LLCR (1) Max Delta = 10 mOhm</p> <p>20. Cycles Quantity = 100 Cycles</p> <p>21. Mating/Unmating Force (2) - Non Standard</p> <p>22. LLCR (1) Max Delta = 10 mOhm</p>
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**(1) LLCR = EIA-364-23**

Open Circuit Voltage = 20 mV Max  
Test Current = 100 mA Max

**(2) Mating/Unmating Force = Other**

EIA-364-13 Rate of 0.5" per minute

**(3) Nanosecond Event Detection (Mechanical Shock) = Other**

Use EIA-364-87 for Nanosecond Event Detection:  
Test Condition = F (50 nanoseconds at 10 ohms)

Use EIA-364-27 for Mechanical Shock:

Test Condition = H (30 G Peak, 11 milliseconds, Half Sine)  
Number of Shocks = 3 Per Direction, Per Axis, 18 Total

**(4) Nanosecond Event Detection (Random Vibration) = Other**

Use EIA-364-87 for Nanosecond Event Detection:  
Test Condition = F (50 nanoseconds at 10 ohms)

Use EIA-364-TB28E for Random Vibration:

Condition = VA (5.35g RMS Average, 2 Hours/Axis)

## 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 for 105° C.
- 3) Test Time Condition A for 1000 hours.
- 4) All test samples are pre-conditioned at ambient.
- 5) All test samples are exposed to environmental stressing in the mated condition.

### THERMAL SHOCK:

- 1) EIA-364-32, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors*.
- 2) Test Condition II: -65°C to +105°C
- 3) Test Time: ½ hour dwell at each temperature extreme
- 4) Test Duration: 5 Cycles
- 5) All test samples are pre-conditioned at ambient.
- 6) 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 C, 500 Hours.
- 3) Method III, +25° C to + 65° C, 80% to 98% Relative Humidity excluding sub-cycles 7a.
- 4) All samples are pre-conditioned at ambient.
- 5) All test samples are exposed to environmental stressing in the mated condition.

### 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.

### MECHANICAL SHOCK (Specified Pulse):

- 1) Reference document: EIA-364-27, *Mechanical Shock Test Procedure for Electrical Connectors*
- 2) Test Condition: H
- 3) Peak Value: 30 G
- 4) Duration: 11 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-TB28E, *Vibration Test Procedure for Electrical Connectors*
- 2) Test Condition V, Letter A
- 3) Power Spectral Density: 0.04 G<sup>2</sup> / Hz
- 4) G ‘RMS’: 5.35
- 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

**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  $+7.5$  mOhms: -----Minor
  - c.  $+7.6$  to  $+10.0$  mOhms:-----Acceptable
  - d.  $+10.1$  to  $+50.0$  mOhms: -----Marginal
  - e.  $+50.1$  to  $+1000$  mOhms: -----Unstable
  - f.  $>+1000$  mOhms:-----Open Failure

**RESULTS****Mating – Unmating Forces****Thermal Shock/Humidity/Dust/Durability Group****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

- **Initial**
  - Mating -----61.86 lbs
  - Unmating -----39.82 lbs
- **After Humidity**
  - Mating -----58.32 lbs
  - Unmating -----40.16 lbs

**Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphenol-RA Mated to Samtec-VT)**

- **Initial**
  - Mating -----54.78 lbs
  - Unmating -----45.65 lbs
- **After Humidity**
  - Mating -----51.36 lbs
  - Unmating -----43.26 lbs

**Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

- **Initial**
  - Mating -----53.74 lbs
  - Unmating -----43.33 lbs
- **After Humidity**
  - Mating -----49.89 lbs
  - Unmating -----38.69 lbs

**Group 4: AX610-00218/923-600E-30D(Amphenol -RA Mated to Amphenol -VT)**

- **Initial**
  - Mating -----46.62 lbs
  - Unmating -----41.54 lbs
- **After Humidity**
  - Mating -----42.33 lbs
  - Unmating -----37.56 lbs

**RESULTS Continued****Temperature Life Group****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

- **Initial**
  - Mating -----58.43 lbs
  - Unmating -----38.84 lbs
- **After Thermal**
  - Mating -----44.08 lbs
  - Unmating -----39.63 lbs

**Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphenol-RA Mated to Samtec-VT)**

- **Initial**
  - Mating -----49.37 lbs
  - Unmating -----37.02 lbs
- **After Thermal**
  - Mating -----33.23 lbs
  - Unmating -----31.14 lbs

**Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

- **Initial**
  - Mating -----63.54 lbs
  - Unmating -----40.79 lbs
- **After Thermal**
  - Mating -----47.94 lbs
  - Unmating -----41.35 lbs

**Group 4: AX610-00218/923-600E-30D(Amphenol -RA Mated to Amphenol -VT)**

- **Initial**
  - Mating -----51.59 lbs
  - Unmating -----38.31 lbs
- **After Thermal**
  - Mating -----43.26 lbs
  - Unmating -----32.59 lbs

**RESULTS Continued**

**Vibration and Mechanical Shock with Durability Group**

**Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

- **Initial**
  - Mating -----56.20 lbs
  - Unmating -----41.84 lbs
- **After 100 cycles**
  - Mating -----86.82 lbs
  - Unmating -----64.05 lbs

**Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphentol-RA Mated to Samtec-VT)**

- **Initial**
  - Mating -----54.81 lbs
  - Unmating -----40.33 lbs
- **After 100 cycles**
  - Mating -----77.53 lbs
  - Unmating -----60.07 lbs

**Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

- **Initial**
  - Mating -----56.99 lbs
  - Unmating -----42.66 lbs
- **After 100 cycles**
  - Mating -----93.33 lbs
  - Unmating -----75.30 lbs

**Group 4: AX610-00218/923-600E-30D(Amphentol -RA Mated to Amphenol -VT)**

- **Initial**
  - Mating -----46.60 lbs
  - Unmating -----42.05 lbs
- **After 100 cycles**
  - Mating -----72.84 lbs
  - Unmating -----62.60 lbs

**RESULTS Continued****LLCR Thermal Shock/Humidity/Dust/Durability Group (196 signal and 120 ground LLCR test points)****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)****Signal pin**

- **Initial** ----- 27.45 mOhms Max

**Ground pin**

- **Initial** ----- 16.48 mOhms Max
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms**-----304 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 12 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Dust**
  - **<= +5.0 mOhms**-----302 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 12 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----2 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Thermal Shock**
  - **<= +5.0 mOhms**-----305 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 11 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Humidity**
  - **<= +5.0 mOhms**-----304 Points ----- Stable
  - **+5.1 to +7.5mOhms** ----- 12 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure

**RESULTS Continued****Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphentol-RA Mated to Samtec-VT)****Signal pin**

- **Initial** ----- 31.06 mOhms Max

**Ground pin**

- **Initial** ----- 16.64 mOhms Max
- **Durability, 250 Cycles**
  - <= +5.0 mOhms-----300 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 16 Points ----- Minor
  - +7.6 to +10.0 mOhms -----0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Dust**
  - <= +5.0 mOhms-----308 Points ----- Stable
  - +5.1 to +7.5 mOhms -----7 Points ----- Minor
  - +7.6 to +10.0 mOhms -----1 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Thermal Shock**
  - <= +5.0 mOhms-----304 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 10 Points ----- Minor
  - +7.6 to +10.0 mOhms -----2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Humidity**
  - <= +5.0 mOhms-----302 Points ----- Stable
  - +5.1 to +7.5mOhms ----- 13 Points ----- Minor
  - +7.6 to +10.0 mOhms -----1 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms -----0 Points ----- Open Failure

**RESULTS Continued****Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)****Signal pin**

- **Initial** ----- 29.66 mOhms Max

**Ground pin**

- **Initial** ----- 16.43 mOhms Max
- **Durability, 250 Cycles**
  - <= +5.0 mOhms-----269 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 47 Points ----- Minor
  - +7.6 to +10.0 mOhms -----0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Dust**
  - <= +5.0 mOhms-----268 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 48 Points ----- Minor
  - +7.6 to +10.0 mOhms -----0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Thermal Shock**
  - <= +5.0 mOhms-----272 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 42 Points ----- Minor
  - +7.6 to +10.0 mOhms -----2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Humidity**
  - <= +5.0 mOhms-----273 Points ----- Stable
  - +5.1 to +7.5mOhms ----- 43 Points ----- Minor
  - +7.6 to +10.0 mOhms -----0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms -----0 Points ----- Open Failure

**RESULTS Continued****Group 4: AX610-00218/923-600E-30D(Amphanol -RA Mated to Amphanol -VT)****Signal pin**

- **Initial** ----- 32.47 mOhms Max

**Ground pin**

- **Initial** ----- 22.70 mOhms Max
- **Durability, 250 Cycles**
  - <= +5.0 mOhms-----311 Points ----- Stable
  - +5.1 to +7.5 mOhms -----5 Points ----- Minor
  - +7.6 to +10.0 mOhms -----0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Dust**
  - <= +5.0 mOhms-----312 Points ----- Stable
  - +5.1 to +7.5 mOhms -----4 Points ----- Minor
  - +7.6 to +10.0 mOhms -----0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Thermal Shock**
  - <= +5.0 mOhms-----311 Points ----- Stable
  - +5.1 to +7.5 mOhms -----3 Points ----- Minor
  - +7.6 to +10.0 mOhms -----2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms-----0 Points ----- Open Failure
- **Humidity**
  - <= +5.0 mOhms-----311 Points ----- Stable
  - +5.1 to +7.5mOhms -----3 Points ----- Minor
  - +7.6 to +10.0 mOhms -----2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms -----0 Points ----- Marginal
  - +50.1 to +1000 mOhms-----0 Points ----- Unstable
  - >+1000 mOhms -----0 Points ----- Open Failure

**RESULTS Continued****LLCR Temperature Life Group (196 signal and 120 ground LLCR test points)****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)****Signal pin**

- Initial ----- 27.1 mOhms Max

**Ground pin**

- Initial ----- 16.3 mOhms Max
- 1000hr Thermal Age
  - <= +5.0 mOhms ----- 313 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 2 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 1 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure

**Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphenol-RA Mated to Samtec-VT)****Signal pin**

- Initial ----- 29.6 mOhms Max

**Ground pin**

- Initial ----- 16.4 mOhms Max
- 1000hr Thermal Age
  - <= +5.0 mOhms ----- 314 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 2 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure

**Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)****Signal pin**

- Initial ----- 27.2 mOhms Max

**Ground pin**

- Initial ----- 16.3 mOhms Max
- 1000hr Thermal Age
  - <= +5.0 mOhms ----- 315 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 1 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure

**Group 4: AX610-00218/923-600E-30D(Amphenol -RA Mated to Amphenol -VT)****Signal pin**

- Initial ----- 29.5 mOhms Max

**Ground pin**

- Initial ----- 16.2 mOhms Max
- 1000hr Thermal Age
  - <= +5.0 mOhms ----- 316 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 0 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure

**RESULTS Continued****LLCR Vibration and Mechanical Shock with Durability Group (196 signal and 120 ground LLCR test points)****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)****Signal pin**

- Initial ----- 27.20 mOhms Max

**Ground pin**

- Initial ----- 15.89 mOhms Max
- 100 Cycles
  - <= +5.0 mOhms ----- 300 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 14 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Dust
  - <= +5.0 mOhms ----- 300 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 15 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 1 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Shock X
  - <= +5.0 mOhms ----- 300 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 16 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Shock Y
  - <= +5.0 mOhms ----- 302 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 14 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Shock Z
  - <= +5.0 mOhms ----- 299 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 16 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 1 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Vibe X
  - <= +5.0 mOhms ----- 299 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 17 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Vibe Y
  - <= +5.0 mOhms ----- 301 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 15 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 0 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable

- **>+1000 mOhms-----0 Points----- Open Failure**
- **Vibe Z**
  - **<= +5.0 mOhms-----300 Points----- Stable**
  - **+5.1 to +7.5 mOhms ----- 16 Points----- Minor**
  - **+7.6 to +10.0 mOhms -----0 Points----- Acceptable**
  - **+10.1 to +50.0 mOhms -----0 Points----- Marginal**
  - **+50.1 to +1000 mOhms-----0 Points----- Unstable**
  - **>+1000 mOhms-----0 Points----- Open Failure**
- **100 Cycles**
  - **<= +5.0 mOhms-----301 Points----- Stable**
  - **+5.1 to +7.5 mOhms ----- 15 Points----- Minor**
  - **+7.6 to +10.0 mOhms -----0 Points----- Acceptable**
  - **+10.1 to +50.0 mOhms -----0 Points----- Marginal**
  - **+50.1 to +1000 mOhms-----0 Points----- Unstable**
  - **>+1000 mOhms-----0 Points----- Open Failure**

**Mechanical Shock & Random Vibration:**

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

**RESULTS Continued****LLCR Vibration and Mechanical Shock with Durability Group (196 signal and 120 ground LLCR test points)****Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphentol-RA Mated to Samtec-VT)****Signal pin**

- Initial ----- 30.68 mOhms Max

**Ground pin**

- Initial ----- 16.53 mOhms Max
- 100 Cycles
  - <= +5.0 mOhms ----- 303 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 11 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Dust
  - <= +5.0 mOhms ----- 305 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 10 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 1 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Shock X
  - <= +5.0 mOhms ----- 302 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 13 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 1 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Shock Y
  - <= +5.0 mOhms ----- 305 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 9 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Shock Z
  - <= +5.0 mOhms ----- 304 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 10 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Vibe X
  - <= +5.0 mOhms ----- 304 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 10 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
  - >+1000 mOhms ----- 0 Points ----- Open Failure
- Vibe Y
  - <= +5.0 mOhms ----- 305 Points ----- Stable
  - +5.1 to +7.5 mOhms ----- 9 Points ----- Minor
  - +7.6 to +10.0 mOhms ----- 2 Points ----- Acceptable
  - +10.1 to +50.0 mOhms ----- 0 Points ----- Marginal
  - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable

- **>+1000 mOhms-----0 Points ----- Open Failure**
- **Vibe Z**
  - **<= +5.0 mOhms-----301 Points ----- Stable**
  - **+5.1 to +7.5 mOhms ----- 14 Points ----- Minor**
  - **+7.6 to +10.0 mOhms ----- 1 Points ----- Acceptable**
  - **+10.1 to +50.0 mOhms -----0 Points ----- Marginal**
  - **+50.1 to +1000 mOhms-----0 Points ----- Unstable**
  - **>+1000 mOhms-----0 Points ----- Open Failure**
- **100 Cycles**
  - **<= +5.0 mOhms-----305 Points ----- Stable**
  - **+5.1 to +7.5 mOhms -----9 Points ----- Minor**
  - **+7.6 to +10.0 mOhms -----2 Points ----- Acceptable**
  - **+10.1 to +50.0 mOhms -----0 Points ----- Marginal**
  - **+50.1 to +1000 mOhms-----0 Points ----- Unstable**
  - **>+1000 mOhms-----0 Points ----- Open Failure**

**Mechanical Shock & Random Vibration:**

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

**RESULTS Continued****LLCR Vibration and Mechanical Shock with Durability Group (196 signal and 120 ground LLCR test points)****Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)****Signal pin**

- **Initial** ----- 26.81 mOhms Max

**Ground pin**

- **Initial** ----- 17.10 mOhms Max
- **100 Cycles**
  - **<= +5.0 mOhms**-----301 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 15 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Dust**
  - **<= +5.0 mOhms**-----305 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 10 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----1 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Shock X**
  - **<= +5.0 mOhms**-----297 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 17 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----2 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Shock Y**
  - **<= +5.0 mOhms**-----299 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 16 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----1 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Shock Z**
  - **<= +5.0 mOhms**-----303 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 11 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----2 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Vibe X**
  - **<= +5.0 mOhms**-----301 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 15 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Vibe Y**
  - **<= +5.0 mOhms**-----302 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 14 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable

- **>+1000 mOhms-----0 Points----- Open Failure**
- **Vibe Z**
  - **<= +5.0 mOhms-----302 Points----- Stable**
  - **+5.1 to +7.5 mOhms ----- 12 Points----- Minor**
  - **+7.6 to +10.0 mOhms ----- 2 Points----- Acceptable**
  - **+10.1 to +50.0 mOhms -----0 Points----- Marginal**
  - **+50.1 to +1000 mOhms-----0 Points----- Unstable**
  - **>+1000 mOhms-----0 Points----- Open Failure**
- **100 Cycles**
  - **<= +5.0 mOhms-----300 Points----- Stable**
  - **+5.1 to +7.5 mOhms ----- 16 Points----- Minor**
  - **+7.6 to +10.0 mOhms -----0 Points----- Acceptable**
  - **+10.1 to +50.0 mOhms -----0 Points----- Marginal**
  - **+50.1 to +1000 mOhms-----0 Points----- Unstable**
  - **>+1000 mOhms-----0 Points----- Open Failure**

**Mechanical Shock & Random Vibration:**

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

**RESULTS Continued****LLCR Vibration and Mechanical Shock with Durability Group (196 signal and 120 ground LLCR test points)****Group 4: AX610-00218/923-600E-30D(Amphentol -RA Mated to Amphenol -VT)****Signal pin**

- **Initial** ----- 30.02 mOhms Max

**Ground pin**

- **Initial** ----- 16.56 mOhms Max
- **100 Cycles**
  - **<= +5.0 mOhms**-----306 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 10 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Dust**
  - **<= +5.0 mOhms**-----307 Points ----- Stable
  - **+5.1 to +7.5 mOhms** -----8 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----1 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Shock X**
  - **<= +5.0 mOhms**-----303 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 12 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----1 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Shock Y**
  - **<= +5.0 mOhms**-----305 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 11 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Shock Z**
  - **<= +5.0 mOhms**-----307 Points ----- Stable
  - **+5.1 to +7.5 mOhms** -----9 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Vibe X**
  - **<= +5.0 mOhms**-----306 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 10 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable
  - **>+1000 mOhms**-----0 Points ----- Open Failure
- **Vibe Y**
  - **<= +5.0 mOhms**-----305 Points ----- Stable
  - **+5.1 to +7.5 mOhms** ----- 11 Points ----- Minor
  - **+7.6 to +10.0 mOhms** -----0 Points ----- Acceptable
  - **+10.1 to +50.0 mOhms** -----0 Points ----- Marginal
  - **+50.1 to +1000 mOhms**-----0 Points ----- Unstable

- **>+1000 mOhms-----0 Points ----- Open Failure**
- **Vibe Z**
  - **<= +5.0 mOhms-----304 Points ----- Stable**
  - **+5.1 to +7.5 mOhms ----- 11 Points ----- Minor**
  - **+7.6 to +10.0 mOhms ----- 1 Points ----- Acceptable**
  - **+10.1 to +50.0 mOhms -----0 Points ----- Marginal**
  - **+50.1 to +1000 mOhms-----0 Points ----- Unstable**
  - **>+1000 mOhms-----0 Points ----- Open Failure**
- **100 Cycles**
  - **<= +5.0 mOhms-----305 Points ----- Stable**
  - **+5.1 to +7.5 mOhms ----- 11 Points ----- Minor**
  - **+7.6 to +10.0 mOhms -----0 Points ----- Acceptable**
  - **+10.1 to +50.0 mOhms -----0 Points ----- Marginal**
  - **+50.1 to +1000 mOhms-----0 Points ----- Unstable**
  - **>+1000 mOhms-----0 Points ----- Open Failure**

**Mechanical Shock & Random Vibration:**

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

**DATA SUMMARIES****MATING/UNMATING:****Thermal Shock/Humidity/Dust/Durability Group****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

	Initial				After Humidity			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	275.14	61.86	177.11	39.82	259.41	58.32	178.63	40.16
Maximum	275.14	61.86	177.11	39.82	259.41	58.32	178.63	40.16
<b>Average</b>	275.14	<b>61.86</b>	177.11	<b>39.82</b>	259.41	<b>58.32</b>	178.63	<b>40.16</b>
Count	1	1	1	1	1	1	1	1

**Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphentol-RA Mated to Samtec-VT)**

	Initial				After Humidity			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	243.67	54.78	203.06	45.65	228.45	51.36	192.42	43.26
Maximum	243.67	54.78	203.06	45.65	228.45	51.36	192.42	43.26
<b>Average</b>	243.67	<b>54.78</b>	203.06	<b>45.65</b>	228.45	<b>51.36</b>	192.42	<b>43.26</b>
Count	1	1	1	1	1	1	1	1

**Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

	Initial				After Humidity			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	239.04	53.74	192.73	43.33	221.91	49.89	172.09	38.69
Maximum	239.04	53.74	192.73	43.33	221.91	49.89	172.09	38.69
<b>Average</b>	239.04	<b>53.74</b>	192.73	<b>43.33</b>	221.91	<b>49.89</b>	172.09	<b>38.69</b>
Count	1	1	1	1	1	1	1	1

**Group 4: AX610-00218/923-600E-30D(Amphentol -RA Mated to Amphenol -VT)**

	Initial				After Humidity			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	207.38	46.62	184.78	41.54	187.84	42.23	167.07	37.56
Maximum	207.38	46.62	184.78	41.54	187.84	42.23	167.07	37.56
<b>Average</b>	207.38	<b>46.62</b>	184.78	<b>41.54</b>	187.84	<b>42.23</b>	167.07	<b>37.56</b>
Count	1	1	1	1	1	1	1	1

**DATA SUMMARIES Continued****Temperature Life Group****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

	Initial				After Thermals			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	259.91	58.43	172.76	38.84	196.05	44.08	176.25	39.63
Maximum	259.91	58.43	172.76	38.84	196.05	44.08	176.25	39.63
<b>Average</b>	259.91	<b>58.43</b>	172.76	<b>38.84</b>	196.05	<b>44.08</b>	176.25	<b>39.63</b>
Count	1	1	1	1	1	1	1	1

**Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphentol-RA Mated to Samtec-VT)**

	Initial				After Thermals			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	219.58	49.37	164.66	37.02	147.79	33.23	138.50	31.14
Maximum	219.58	49.37	164.66	37.02	147.79	33.23	138.50	31.14
<b>Average</b>	219.58	<b>49.37</b>	164.66	<b>37.02</b>	147.79	<b>33.23</b>	138.50	<b>31.14</b>
Count	1	1	1	1	1	1	1	1

**Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

	Initial				After Thermals			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	282.63	63.54	181.45	40.79	213.22	47.94	183.91	41.35
Maximum	282.63	63.54	181.45	40.79	213.22	47.94	183.91	41.35
<b>Average</b>	282.63	<b>63.54</b>	181.45	<b>40.79</b>	213.22	<b>47.94</b>	183.91	<b>41.35</b>
Count	1	1	1	1	1	1	1	1

**Group 4: AX610-00218/923-600E-30D(Amphentol -RA Mated to Amphenol -VT)**

	Initial				After Thermals			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	229.45	51.59	170.39	38.31	192.41	43.26	144.95	32.59
Maximum	229.45	51.59	170.39	38.31	192.41	43.26	144.95	32.59
<b>Average</b>	229.45	<b>51.59</b>	170.39	<b>38.31</b>	192.41	<b>43.26</b>	144.95	<b>32.59</b>
Count	1	1	1	1	1	1	1	1

**DATA SUMMARIES Continued****Vibration and Mechanical Shock with Durability Group****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

	Initial				After 100 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	249.96	56.20	186.11	41.84	386.16	86.82	284.91	64.05
Maximum	249.96	56.20	186.11	41.84	386.16	86.82	284.91	64.05
<b>Average</b>	249.96	<b>56.20</b>	186.11	<b>41.84</b>	386.16	<b>86.82</b>	284.91	<b>64.05</b>
Count	1	1	1	1	1	1	1	1

**Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphenol-RA Mated to Samtec-VT)**

	Initial				After 100 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	243.79	54.81	179.41	40.33	344.87	77.53	267.21	60.07
Maximum	243.79	54.81	179.41	40.33	344.87	77.53	267.21	60.07
<b>Average</b>	243.79	<b>54.81</b>	179.41	<b>40.33</b>	344.87	<b>77.53</b>	267.21	<b>60.07</b>
Count	1	1	1	1	1	1	1	1

**Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

	Initial				After Shock/Vibe			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	253.50	56.99	189.76	42.66	415.11	93.33	334.95	75.30
Maximum	253.50	56.99	189.76	42.66	415.11	93.33	334.95	75.30
<b>Average</b>	253.50	<b>56.99</b>	189.76	<b>42.66</b>	415.11	<b>93.33</b>	334.95	<b>75.30</b>
Count	1	1	1	1	1	1	1	1

**Group 4: AX610-00218/923-600E-30D(Amphenol -RA Mated to Amphenol -VT)**

	Initial				After 100 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	207.27	46.60	187.03	42.05	324.01	72.84	278.42	62.60
Maximum	207.27	46.60	187.03	42.05	324.01	72.84	278.42	62.60
<b>Average</b>	207.27	<b>46.60</b>	187.03	<b>42.05</b>	324.01	<b>72.84</b>	278.42	<b>62.60</b>
Count	1	1	1	1	1	1	1	1

### DATA SUMMARIES Continued

**LLCR Thermal Shock/Humidity/Dust/Durability Group:**

- 1) A total of 196 signal and 120 ground 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  $+7.5$  mOhms:-----Minor
  - c.  $+7.6$  to  $+10.0$  mOhms: -----Acceptable
  - d.  $+10.1$  to  $+50.0$  mOhms:-----Marginal
  - e.  $+50.1$  to  $+1000$  mOhms-----Unstable
  - f.  $>+1000$  mOhms:-----Open Failure

**Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

LLCR Measurement Summaries by Pin Type					
Date	4/11/2019	5/16/2019	5/21/2019	5/23/2019	6/17/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	36	45	42	48	49
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values					
	Actual Initial	Delta 250 Cycles	Delta Dust	Delta Thermal Shock	Delta Humidity
Pin Type 1: Signal					
Average	18.63	0.46	0.65	0.74	0.78
St. Dev.	4.94	0.34	0.47	0.45	0.40
Min	10.66	0.03	0.02	0.01	0.07
Max	27.45	2.75	4.40	2.86	3.41
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	282
Pin Type 2: Ground					
Average	13.13	2.16	2.27	2.18	2.31
St. Dev.	2.13	2.00	2.08	2.00	2.01
Min	9.15	0.02	0.01	0.01	0.01
Max	16.48	7.01	7.74	7.35	6.92
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120

LLCR Delta Count by Category						
mOhms	Stable	Minor	Acceptable	Marginal	Unstable	Open
	$\leq 5$	$>5.1$ & $\leq 7.5$	$>7.6$ & $\leq 10$	$>10.1$ & $\leq 50$	$>50$ & $\leq 1000$	$>1000$
<b>250 Cycles</b>	304	12	0	0	0	0
<b>Dust</b>	302	12	2	0	0	0
<b>Thermal Shock</b>	305	11	0	0	0	0
<b>Humidity</b>	304	12	0	0	0	0

**DATA SUMMARIES Continued****Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphentol-RA Mated to Samtec-VT)**

<b>LLCR Measurement Summaries by Pin Type</b>					
Date	4/11/2019	5/16/2019	5/21/2019	5/23/2019	6/17/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	36	45	42	48	49
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 250 Cycles</b>	<b>Delta Dust</b>	<b>Delta Thermal Shock</b>	<b>Delta Humidity</b>
<b>Pin Type 1: Signal</b>					
Average	18.93	0.52	0.70	0.80	0.95
St. Dev.	5.48	0.39	0.48	0.53	0.47
Min	10.14	0.00	0.01	0.00	0.01
Max	31.06	1.81	2.20	3.27	2.60
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	282
<b>Pin Type 2: Ground</b>					
Average	13.05	2.30	2.30	2.41	2.40
St. Dev.	2.30	2.16	2.08	2.03	2.02
Min	8.54	0.01	0.00	0.04	0.08
Max	16.64	7.22	7.62	7.83	7.60
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120

<b>LLCR Delta Count by Category</b>						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	<=5	>5 & <=7.5	>7.5 & <=10	>10 & <=50	>50 & <=1000	>1000
<b>250 Cycles</b>	<b>300</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Dust</b>	<b>308</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Thermal Shock</b>	<b>304</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Humidity</b>	<b>302</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

**DATA SUMMARIES Continued****Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

<b>LLCR Measurement Summaries by Pin Type</b>					
Date	4/11/2019	5/16/2019	5/21/2019	5/23/2019	6/17/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	36	45	45	48	50
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 250 Cycles</b>	<b>Delta Dust</b>	<b>Delta Thermal Shock</b>	<b>Delta Humidity</b>
<b>Pin Type 1: Signal</b>					
Average	17.65	2.00	1.99	2.10	1.99
St. Dev.	5.04	1.71	1.67	1.67	1.67
Min	9.91	0.01	0.04	0.01	0.00
Max	29.66	6.68	6.16	6.57	6.49
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	12.77	3.15	3.20	3.22	3.14
St. Dev.	2.29	1.95	2.01	2.09	2.04
Min	8.54	0.01	0.02	0.04	0.02
Max	16.43	7.06	7.47	8.79	7.29
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120

<b>LLCR Delta Count by Category</b>						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	<=5	>5 & <=7.5	>7.5 & <=10	>10 & <=50	>50 & <=1000	>1000
<b>250 Cycles</b>	269	47	0	0	0	0
<b>Dust</b>	268	48	0	0	0	0
<b>Thermal Shock</b>	272	42	2	0	0	0
<b>Humidity</b>	273	43	0	0	0	0

**DATA SUMMARIES Continued****Group 4: AX610-00218/923-600E-30D(Amphénol -RA Mated to Amphenol -VT)**

<b>LLCR Measurement Summaries by Pin Type</b>					
Date	4/11/2019	5/16/2019	5/21/2019	5/23/2019	6/17/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	36	45	42	48	49
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 250 Cycles</b>	<b>Delta Dust</b>	<b>Delta Thermal Shock</b>	<b>Delta Humidity</b>
<b>Pin Type 1: Signal</b>					
Average	22.46	0.44	0.54	0.54	0.37
St. Dev.	5.02	0.40	0.43	0.42	0.30
Min	13.32	0.00	0.01	0.00	0.00
Max	32.47	2.11	2.07	1.87	2.39
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	18.48	1.54	1.62	1.62	1.57
St. Dev.	1.99	1.65	1.57	1.66	1.68
Min	13.97	0.00	0.01	0.01	0.00
Max	22.70	7.43	6.86	8.02	7.80
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120

<b>LLCR Delta Count by Category</b>						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	<=5	>5 & <=7.5	>7.5 & <=10	>10 & <=50	>50 & <=1000	>1000
<b>250 Cycles</b>	311	5	0	0	0	0
<b>Dust</b>	312	4	0	0	0	0
<b>Thermal Shock</b>	311	3	2	0	0	0
<b>Humidity</b>	311	3	2	0	0	0

### DATA SUMMARIES Continued

**LLCR Temperature Life Group:**

- 1) A total of 196 signal and 120 ground 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  $+7.5$  mOhms:-----Minor
  - c.  $+7.6$  to  $+10.0$  mOhms: -----Acceptable
  - d.  $+10.1$  to  $+50.0$  mOhms:-----Marginal
  - e.  $+50.1$  to  $+1000$  mOhms-----Unstable
  - f.  $>+1000$  mOhms:-----Open Failure

**Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

LLCR Measurement Summaries by Pin Type		
Date	9/18/2019	11/1/2019
Room Temp (Deg C)	23	23
Rel Humidity (%)	52	36
Technician	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual</b>	<b>Delta</b>
	<b>Initial</b>	<b>1000hr Thermal Age</b>
<b>Pin Type 1: Signal</b>		
Average	18.3	0.7
St. Dev.	4.9	1.1
Min	10.4	0.0
Max	27.1	7.9
Summary Count	196	196
Total Count	196	196
<b>Pin Type 2: Ground</b>		
Average	12.8	0.4
St. Dev.	2.2	0.4
Min	8.8	0.0
Max	16.3	2.6
Summary Count	120	120
Total Count	120	120

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	$\leq 5$	$>5 \ \& \ \leq 7.5$	$>7.5 \ \& \ \leq 10$	$>10 \ \& \ \leq 50$	$>50 \ \& \ \leq 1000$	$>1000$
<b>1000hr Thermal Age</b>	<b>313</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

**DATA SUMMARIES Continued****Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphentol-RA Mated to Samtec-VT)**

<b>LLCR Measurement Summaries by Pin Type</b>		
Date	9/18/2019	11/1/2019
Room Temp (Deg C)	23	23
Rel Humidity (%)	52	37
Technician	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 1000hr Thermal Age</b>
<b>Pin Type 1: Signal</b>		
Average	18.5	0.6
St. Dev.	5.4	0.8
Min	10.2	0.0
Max	29.6	6.5
Summary Count	196	196
Total Count	196	196
<b>Pin Type 2: Ground</b>		
Average	12.8	0.7
St. Dev.	2.3	0.9
Min	8.3	0.0
Max	16.4	4.4
Summary Count	120	120
Total Count	120	120

<b>LLCR Delta Count by Category</b>						
	<b>Stable</b>	<b>Minor</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unstable</b>	<b>Open</b>
<b>mOhms</b>	<b>&lt;=5</b>	<b>&gt;5 &amp; &lt;=7.5</b>	<b>&gt;7.5 &amp; &lt;=10</b>	<b>&gt;10 &amp; &lt;=50</b>	<b>&gt;50 &amp; &lt;=1000</b>	<b>&gt;1000</b>
<b>1000hr Thermal Age</b>	<b>314</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**DATA SUMMARIES Continued****Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

<b>LLCR Measurement Summaries by Pin Type</b>		
Date	9/18/2019	11/1/2019
Room Temp (Deg C)	23	23
Rel Humidity (%)	52	35
Technician	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 1000hr Thermal Age</b>
<b>Pin Type 1: Signal</b>		
Average	18.3	0.7
St. Dev.	5.0	0.9
Min	10.5	0.0
Max	27.2	5.2
Summary Count	196	196
Total Count	196	196
<b>Pin Type 2: Ground</b>		
Average	13.0	0.5
St. Dev.	2.2	0.6
Min	9.1	0.0
Max	16.3	4.7
Summary Count	120	120
Total Count	120	120

<b>LLCR Delta Count by Category</b>						
	<b>Stable</b>	<b>Minor</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unstable</b>	<b>Open</b>
<b>mOhms</b>	<b>&lt;=5</b>	<b>&gt;5 &amp; &lt;=7.5</b>	<b>&gt;7.5 &amp; &lt;=10</b>	<b>&gt;10 &amp; &lt;=50</b>	<b>&gt;50 &amp; &lt;=1000</b>	<b>&gt;1000</b>
<b>1000hr Thermal Age</b>	<b>315</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**DATA SUMMARIES Continued****Group 4: AX610-00218/923-600E-30D(Amphénol -RA Mated to Amphenol -VT)**

<b>LLCR Measurement Summaries by Pin Type</b>		
Date	9/19/2019	11/1/2019
Room Temp (Deg C)	23	23
Rel Humidity (%)	50	37
Technician	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 1000hr Thermal Age</b>
<b>Pin Type 1: Signal</b>		
Average	18.4	0.6
St. Dev.	5.3	0.7
Min	10.0	0.0
Max	29.5	3.6
Summary Count	196	196
Total Count	196	196
<b>Pin Type 2: Ground</b>		
Average	12.8	0.6
St. Dev.	2.2	0.7
Min	8.4	0.0
Max	16.2	3.9
Summary Count	120	120
Total Count	120	120

<b>LLCR Delta Count by Category</b>						
	<b>Stable</b>	<b>Minor</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unstable</b>	<b>Open</b>
<b>mOhms</b>	<=5	>5 & <=7.5	>7.5 & <=10	>10 & <=50	>50 & <=1000	>1000
<b>1000hr Thermal Age</b>	316	0	0	0	0	0

**DATA SUMMARIES Continued****LLCR Vibration and Mechanical Shock with Durability Group:**

- 1) A total of 196 signal and 120 ground 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  $+7.5$  mOhms:-----Minor
  - c.  $+7.6$  to  $+10.0$  mOhms: -----Acceptable
  - d.  $+10.1$  to  $+50.0$  mOhms:-----Marginal
  - e.  $+50.1$  to  $+1000$  mOhms-----Unstable
  - f.  $>+1000$  mOhms:-----Open Failure

**DATA SUMMARIES Continued****Group 1: HDTF-6-08-S-RA-HS-100/HDTM-6-08-1-S-VT-0-1(Samtec-RA Mated to Samtec-VT)**

<b>LLCR Measurement Summaries by Pin Type</b>					
Date	4/11/2019	5/16/2019	5/21/2019	5/31/2019	6/3/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	44	45	42	45	38
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 100 Cycles</b>	<b>Delta Dust</b>	<b>Delta Shock X</b>	<b>Delta Shock Y</b>
<b>Pin Type 1: Signal</b>					
Average	18.26	0.68	0.70	0.73	0.69
St. Dev.	5.01	0.67	0.44	0.58	0.53
Min	10.14	0.00	0.00	0.00	0.02
Max	27.20	6.87	2.28	6.07	4.70
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	12.72	2.37	2.37	2.46	2.36
St. Dev.	2.20	2.18	2.14	2.08	2.10
Min	8.68	0.00	0.00	0.01	0.01
Max	15.89	7.57	7.53	7.41	7.10
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120
<b>LLCR Measurement Summaries by Pin Type</b>					
Date	6/3/2019	6/4/2019	6/6/2019	6/7/2019	6/11/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	38	42	49	47	37
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Delta Shock Z</b>	<b>Delta Vibe X</b>	<b>Delta Vibe Y</b>	<b>Delta Vibe Z</b>	<b>Delta 100 Cycles</b>
<b>Pin Type 1: Signal</b>					
Average	0.77	0.68	0.55	0.64	0.89
St. Dev.	0.75	0.41	0.39	0.44	0.54
Min	0.00	0.10	0.03	0.02	0.05
Max	7.64	3.49	3.11	3.24	3.86
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	2.42	2.36	2.32	2.41	2.31
St. Dev.	2.03	2.13	2.12	2.07	2.07
Min	0.00	0.04	0.00	0.00	0.03
Max	7.35	7.18	7.26	7.38	7.36
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120

<b>LLCR Delta Count by Category</b>						
	<b>Stable</b>	<b>Minor</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unstable</b>	<b>Open</b>
<b>mOhms</b>	<b>&lt;=5</b>	<b>&gt;5 &amp; &lt;=7.5</b>	<b>&gt;7.5 &amp; &lt;=10</b>	<b>&gt;10 &amp; &lt;=50</b>	<b>&gt;50 &amp; &lt;=1000</b>	<b>&gt;1000</b>
<b>100 Cycles</b>	<b>300</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Dust</b>	<b>300</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Shock X</b>	<b>300</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Shock Y</b>	<b>302</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Shock Z</b>	<b>299</b>	<b>16</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Vibe X</b>	<b>299</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Vibe Y</b>	<b>301</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Vibe Z</b>	<b>300</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>100 Cycles</b>	<b>301</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Nanosecond Event Detection:**

<b>Shock and Vibration Event Detection Summary</b>	
Contacts tested	64
Test Condition	H, 30g's, 11ms, Half-Sine
Shock Events	0
Test Condition	50-2000Hz, V-B, 5.35 rms g
Vibration Events	0
<b>Total Events</b>	<b>0</b>

**DATA SUMMARIES Continued****Group 2: AX610-00218/HDTM-6-08-1-S-VT-0-1(Amphentol-RA Mated to Samtec-VT)**

<b>LLCR Measurement Summaries by Pin Type</b>					
Date	4/11/2019	5/16/2019	5/21/2019	5/31/2019	6/3/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	44	45	42	45	38
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 100 Cycles</b>	<b>Delta Dust</b>	<b>Delta Shock X</b>	<b>Delta Shock Y</b>
<b>Pin Type 1: Signal</b>					
Average	18.58	0.74	0.84	1.06	0.84
St. Dev.	5.36	0.64	0.50	0.89	0.76
Min	9.95	0.01	0.01	0.01	0.00
Max	30.68	3.13	2.79	6.80	6.89
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	12.60	2.34	2.38	2.35	2.32
St. Dev.	2.28	2.07	2.05	2.04	2.04
Min	8.11	0.00	0.01	0.00	0.00
Max	16.53	7.69	8.09	7.95	7.94
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120
<b>LLCR Measurement Summaries by Pin Type</b>					
Date	6/3/2019	6/4/2019	6/6/2019	6/7/2019	6/11/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	38	42	48	47	37
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Delta Shock Z</b>	<b>Delta Vibe X</b>	<b>Delta Vibe Y</b>	<b>Delta Vibe Z</b>	<b>Delta 100 Cycles</b>
<b>Pin Type 1: Signal</b>					
Average	0.86	0.88	0.77	0.94	0.96
St. Dev.	0.56	0.70	0.72	0.84	0.45
Min	0.00	0.01	0.01	0.00	0.04
Max	3.74	4.81	6.09	6.01	2.31
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	2.43	2.33	2.34	2.40	2.37
St. Dev.	2.02	2.05	2.07	2.01	2.05
Min	0.01	0.00	0.02	0.01	0.01
Max	7.84	7.80	7.76	7.51	7.93
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120

<b>LLCR Delta Count by Category</b>						
	<b>Stable</b>	<b>Minor</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unstable</b>	<b>Open</b>
<b>mOhms</b>	<b>&lt;=5</b>	<b>&gt;5 &amp; &lt;=7.5</b>	<b>&gt;7.5 &amp; &lt;=10</b>	<b>&gt;10 &amp; &lt;=50</b>	<b>&gt;50 &amp; &lt;=1000</b>	<b>&gt;1000</b>
<b>100 Cycles</b>	303	11	2	0	0	0
<b>Dust</b>	305	10	1	0	0	0
<b>Shock X</b>	302	13	1	0	0	0
<b>Shock Y</b>	305	9	2	0	0	0
<b>Shock Z</b>	304	10	2	0	0	0
<b>Vibe X</b>	304	10	2	0	0	0
<b>Vibe Y</b>	305	9	2	0	0	0
<b>Vibe Z</b>	301	14	1	0	0	0
<b>100 Cycles</b>	305	9	2	0	0	0

**Nanosecond Event Detection:**

<b>Shock and Vibration Event Detection Summary</b>	
Contacts tested	64
Test Condition	H, 30g's, 11ms, Half-Sine
Shock Events	0
Test Condition	50-2000Hz, V-B, 5.35 rms g
Vibration Events	0
<b>Total Events</b>	<b>0</b>

**DATA SUMMARIES Continued****Group 3: HDTF-6-08-S-RA-HS-100/923-600E-30D(Samtec-RA Mated to Amphenol -VT)**

<b>LLCR Measurement Summaries by Pin Type</b>					
Date	4/11/2019	5/16/2019	5/21/2019	5/31/2019	6/3/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	44	45	42	45	38
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 100 Cycles</b>	<b>Delta Dust</b>	<b>Delta Shock X</b>	<b>Delta Shock Y</b>
<b>Pin Type 1: Signal</b>					
Average	18.01	0.51	0.56	0.67	0.58
St. Dev.	4.95	0.44	0.43	0.64	0.47
Min	9.69	0.00	0.00	0.03	0.00
Max	26.81	2.39	2.01	6.37	2.51
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	12.87	2.28	2.22	2.37	2.23
St. Dev.	2.22	2.19	2.04	2.11	2.09
Min	8.26	0.00	0.00	0.01	0.02
Max	17.10	7.41	8.03	7.67	7.71
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120
<b>LLCR Measurement Summaries by Pin Type</b>					
Date	6/4/2019	6/5/2019	6/6/2019	6/7/2019	6/11/2019
Room Temp (Deg C)	23		23	23	23
Rel Humidity (%)	42		48	47	37
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Delta Shock Z</b>	<b>Delta Vibe X</b>	<b>Delta Vibe Y</b>	<b>Delta Vibe Z</b>	<b>Delta 100 Cycles</b>
<b>Pin Type 1: Signal</b>					
Average	0.61	0.58	0.45	0.71	0.60
St. Dev.	0.58	0.69	0.46	0.76	0.37
Min	0.02	0.01	0.01	0.01	0.03
Max	4.91	5.38	3.64	5.32	2.17
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	2.25	2.28	2.25	2.24	2.33
St. Dev.	2.09	2.11	2.12	2.04	2.11
Min	0.01	0.01	0.00	0.01	0.01
Max	7.83	7.36	7.46	8.06	7.30
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120

<b>LLCR Delta Count by Category</b>						
	<b>Stable</b>	<b>Minor</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unstable</b>	<b>Open</b>
<b>mOhms</b>	<b>&lt;=5</b>	<b>&gt;5 &amp; &lt;=7.5</b>	<b>&gt;7.5 &amp; &lt;=10</b>	<b>&gt;10 &amp; &lt;=50</b>	<b>&gt;50 &amp; &lt;=1000</b>	<b>&gt;1000</b>
<b>100 Cycles</b>	301	15	0	0	0	0
<b>Dust</b>	305	10	1	0	0	0
<b>Shock X</b>	297	17	2	0	0	0
<b>Shock Y</b>	299	16	1	0	0	0
<b>Shock Z</b>	303	11	2	0	0	0
<b>Vibe X</b>	301	15	0	0	0	0
<b>Vibe Y</b>	302	14	0	0	0	0
<b>Vibe Z</b>	302	12	2	0	0	0
<b>100 Cycles</b>	300	16	0	0	0	0

**Nanosecond Event Detection:**

<b>Shock and Vibration Event Detection Summary</b>	
Contacts tested	64
Test Condition	H, 30g's, 11ms, Half-Sine
Shock Events	0
Test Condition	50-2000Hz, V-B, 5.35 rms g
Vibration Events	0
<b>Total Events</b>	<b>0</b>

**DATA SUMMARIES Continued****Group 4: AX610-00218/923-600E-30D(Amphentol -RA Mated to Amphenol -VT)**

<b>LLCR Measurement Summaries by Pin Type</b>					
Date	4/11/2019	5/16/2019	5/21/2019	6/3/2019	6/3/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	44	45	42	39	38
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Actual Initial</b>	<b>Delta 100 Cycles</b>	<b>Delta Dust</b>	<b>Delta Shock X</b>	<b>Delta Shock Y</b>
<b>Pin Type 1: Signal</b>					
Average	18.50	0.53	0.61	0.60	0.60
St. Dev.	5.28	0.49	0.46	0.40	0.47
Min	10.26	0.00	0.00	0.01	0.00
Max	30.02	2.69	2.31	2.10	2.56
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	13.03	2.08	2.05	2.22	2.15
St. Dev.	2.31	2.02	1.96	1.97	2.03
Min	8.52	0.00	0.01	0.02	0.03
Max	16.56	7.30	7.82	7.53	7.19
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120
<b>LLCR Measurement Summaries by Pin Type</b>					
Date	6/4/2019	6/5/2019	6/6/2019	6/7/2019	6/11/2019
Room Temp (Deg C)	23	23	23	23	23
Rel Humidity (%)	42	48	48	47	37
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
<b>mOhm values</b>	<b>Delta Shock Z</b>	<b>Delta Vibe X</b>	<b>Delta Vibe Y</b>	<b>Delta Vibe Z</b>	<b>Delta 100 Cycles</b>
<b>Pin Type 1: Signal</b>					
Average	0.52	0.55	0.50	0.60	0.63
St. Dev.	0.37	0.51	0.43	0.58	0.53
Min	0.00	0.00	0.00	0.00	0.00
Max	1.70	3.42	3.30	4.28	3.90
Summary Count	196	196	196	196	196
Total Count	196	196	196	196	196
<b>Pin Type 2: Ground</b>					
Average	2.14	2.15	2.12	2.29	2.11
St. Dev.	2.00	2.03	2.06	2.01	1.98
Min	0.00	0.00	0.00	0.01	0.02
Max	7.42	7.36	7.49	7.57	7.35
Summary Count	120	120	120	120	120
Total Count	120	120	120	120	120

<b>LLCR Delta Count by Category</b>						
	<b>Stable</b>	<b>Minor</b>	<b>Acceptable</b>	<b>Marginal</b>	<b>Unstable</b>	<b>Open</b>
<b>mOhms</b>	<b>&lt;=5</b>	<b>&gt;5 &amp; &lt;=7.5</b>	<b>&gt;7.5 &amp; &lt;=10</b>	<b>&gt;10 &amp; &lt;=50</b>	<b>&gt;50 &amp; &lt;=1000</b>	<b>&gt;1000</b>
<b>100 Cycles</b>	306	10	0	0	0	0
<b>Dust</b>	307	8	1	0	0	0
<b>Shock X</b>	303	12	1	0	0	0
<b>Shock Y</b>	305	11	0	0	0	0
<b>Shock Z</b>	307	9	0	0	0	0
<b>Vibe X</b>	306	10	0	0	0	0
<b>Vibe Y</b>	305	11	0	0	0	0
<b>Vibe Z</b>	304	11	1	0	0	0
<b>100 Cycles</b>	305	11	0	0	0	0

**Nanosecond Event Detection:**

<b>Shock and Vibration Event Detection Summary</b>	
Contacts tested	64
Test Condition	H, 30g's, 11ms, Half-Sine
Shock Events	0
Test Condition	50-2000Hz, V-B, 5.35 rms g
Vibration Events	0
<b>Total Events</b>	<b>0</b>

**EQUIPMENT AND CALIBRATION SCHEDULES****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: 05/29/2019, Next Cal: 05/29/2020**Equipment #:** MO-11**Description:** Switch/Multimeter**Manufacturer:** Keithley**Model:** 3706**Serial #:** 120169**Accuracy:** See Manual

... Last Cal: 09/11/2019, Next Cal: 09/11/2020

**Equipment #:** THC-05**Description:** Temperature/Humidity Chamber (Chamber Room)**Manufacturer:** Thermotron**Model:** SM-8-3800**Serial #:** 05 23 00 02**Accuracy:** See Manual

... Last Cal: 11/14/2019, Next Cal: 05/31/2020

**Equipment #:** TSC-01**Description:** Vertical Thermal Shock Chamber**Manufacturer:** Cincinnati Sub Zero**Model:** VTS-3-6-6-SC/AC**Serial #:** 10-VT14993**Accuracy:** See Manual

... Last Cal: 06/30/2019, Next Cal: 06/30/2020

**Equipment #:** OV-05**Description:** Forced Air Oven, 5 Cu. Ft., 120 V (Chamber Room)**Manufacturer:** Sheldon Mfg.**Model:** CE5F**Serial #:** 02008008**Accuracy:** +/- 5 deg. C

... Last Cal: 02/05/2019, Next Cal: 02/05/2020

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

... Last Cal: 04/22/2019, Next Cal: 04/22/2020

**Equipment #:** ACLM-01**Description:** Accelerometer**Manufacturer:** PCB Piezotronics**Model:** 352C03**Serial #:** 115819**Accuracy:** See Manual

... Last Cal: 07/18/2019, Next Cal: 07/18/2020

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

... Last Cal: 10/31/2019, Next Cal: 10/31/2020