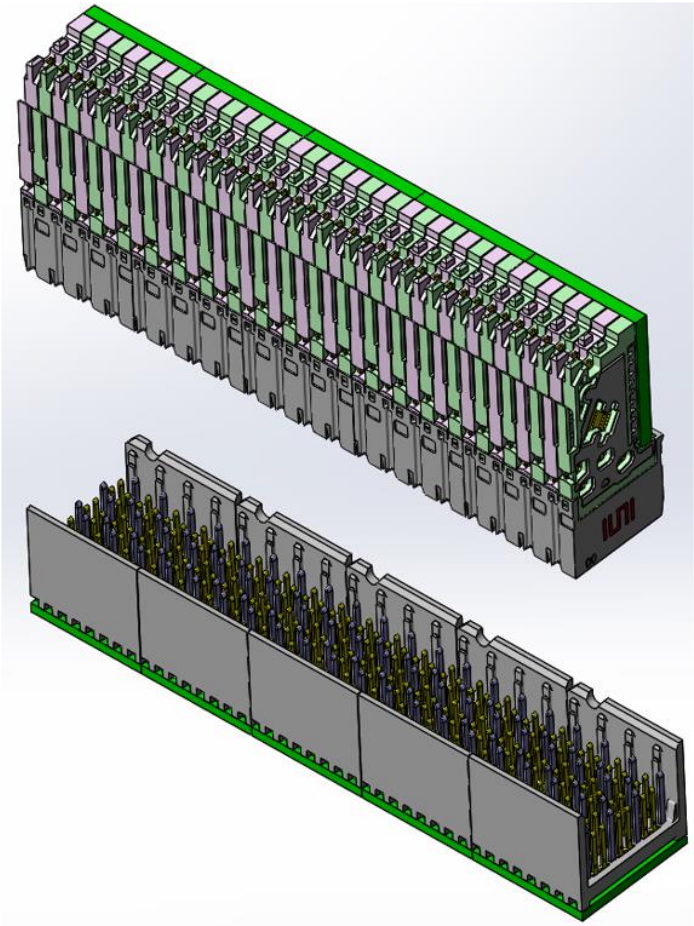
Project Number: Intermateability Qualification Test Report	Tracking Code: 1688927_Report_Rev_1
Requested by: Corey Rose	Date: 1/6/2020
Part #: HDTF-3-08-S-RA-HS-100/HDTM-3-08-1-S-VT-0-1/AX310-00172/923-300E-40D	
Part description: HDTF/HDTM (5 connectors per test boards)	Tech: Aaron McKim
Test Start: 10/8/2018	Test Completed: 12/18/2018



(FIVE CONNECTORS MOUNTED PER TEST BOARD)

INTERMATEABILITY QUALIFICATION TEST REPORT

HDTF/HDTM
SAMTEC: HDTF-3-08-S-RA-HS-100/HDTM-3-08-1-S-VT-0-1
AMPHENOL: AX310-00172/923-300E-40D

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
1/6/2020	**1**	**Initial Issue**	**KH**

CERTIFICATION

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

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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-108355-TST/PCB-108434-TST

FLOWCHARTS

Thermal Shock/Humidity/Dust/Durability

Group 1 HDTF-3-08-S-RA-HS-100 HDTM-3-08-1-S-VT-0-1 200 Points Samtec -RA Mated To Samtec -VT		Group 2 AX310-00172 HDTM-3-08-1-S-VT-0-1 200 Points Amphenol -RA Mated To Samtec -VT		Group 3 HDTF-3-08-S-RA-HS-100 923-300E-40D 200 Points Samtec -RA Mated To Amphenol -VT		Group 4 AX310-00172 923-300E-40D 200 Points Amphenol -RA Mated To Amphenol -VT	
Step	**Description**	**Step**	**Description**	**Step**	**Description**	**Step**	**Description**
1.	Visual Inspection *Note: Check for lifted beams.*	1.	Visual Inspection *Note: Check for lifted beams.*	1.	Visual Inspection *Note: Check for lifted beams.*	1.	Visual Inspection *Note: Check for lifted beams.*
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 *Note: EIA-364-91 Composition 1 Benign, per section 9 GR-1217-CORE Telcordia*	6.	Dust *Note: EIA-364-91 Composition 1 Benign, per section 9 GR-1217-CORE Telcordia*	6.	Dust *Note: EIA-364-91 Composition 1 Benign, per section 9 GR-1217-CORE Telcordia*	6.	Dust *Note: EIA-364-91 Composition 1 Benign, per section 9 GR-1217-CORE Telcordia*
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

Group 1	Group 2	Group 3	Group 4
HDTF-3-08-S-RA-HS-100	AX310-00172	HDTF-3-08-S-RA-HS-100	AX310-00172
HDTM-3-08-1-S-VT-0-1	HDTM-3-08-1-S-VT-0-1	923-300E-40D	923-300E-40D
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 *Note: Check for lifted beams.*	1.	Visual Inspection *Note: Check for lifted beams.*	1.	Visual Inspection *Note: Check for lifted beams.*	1.	Visual Inspection *Note: Check for lifted beams.*
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
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

(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

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

Group 2 AX310-00172 HDTM-3-08-1-S-VT-0-1 200 Points Amphenol -RA Mated To Samtec -VT	
Step	**Description**
1.	Visual Inspection *Note: Check for lifted beams.*
2.	Mating/Unmating Force (2) - Non Standard
3.	LLCR (1)
4.	Cycles Quantity = 100 Cycles
5.	LLCR (1) Max Delta = 10 mOhm
6.	Dust *Note: EIA-364-91 Coposition 1 Benign, per section 9 GR-1217-CORE Telcordia*
7.	LLCR (1) Max Delta = 10 mOhm
8.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard *Note: On X axis.*
9.	LLCR (1) Max Delta = 10 mOhm
10.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard *Note: On Y axis.*
11.	LLCR (1) Max Delta = 10 mOhm
12.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard *Note: On Z axis.*
13.	LLCR (1) Max Delta = 10 mOhm
14.	Nanosecond Event Detection (Random Vibration) (5) - Non Standard

Group 3 HDTF-3-08-S-RA-HS-100 923-300E-40D 200 Points Samtec -RA Mated To Amphenol -VT	
Step	**Description**
1.	Visual Inspection *Note: Check for lifted beams.*
2.	Mating/Unmating Force (2) - Non Standard
3.	LLCR (1)
4.	Cycles Quantity = 100 Cycles
5.	LLCR (1) Max Delta = 10 mOhm
6.	Dust *Note: EIA-364-91 Coposition 1 Benign, per section 9 GR-1217-CORE Telcordia*
7.	LLCR (1) Max Delta = 10 mOhm
8.	Nanosecond Event Detection (Mechanical Shock) (4) - Non Standard *Note: On X axis.*
9.	LLCR (1) Max Delta = 10 mOhm
10.	Nanosecond Event Detection (Mechanical Shock) (4) - Non Standard *Note: On Y axis.*
11.	LLCR (1) Max Delta = 10 mOhm
12.	Nanosecond Event Detection (Mechanical Shock) (4) - Non Standard *Note: On Z axis.*
13.	LLCR (1) Max Delta = 10 mOhm
14.	Nanosecond Event Detection (Random Vibration) (5) - Non Standard

Group 4 AX310-00172 923-300E-40D 200 Points Amphenol -RA Mated To Amphenol -VT	
Step	**Description**
1.	Visual Inspection *Note: Check for lifted beams.*
2.	Mating/Unmating Force (2) - Non Standard
3.	LLCR (1)
4.	Cycles Quantity = 100 Cycles
5.	LLCR (1) Max Delta = 10 mOhm
6.	Dust *Note: EIA-364-91 Coposition 1 Benign, per section 9 GR-1217-CORE Telcordia*
7.	LLCR (1) Max Delta = 10 mOhm
8.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard *Note: On X axis.*
9.	LLCR (1) Max Delta = 10 mOhm
10.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard *Note: On Y axis.*
11.	LLCR (1) Max Delta = 10 mOhm
12.	Nanosecond Event Detection (Mechanical Shock) (3) - Non Standard *Note: On Z axis.*
13.	LLCR (1) Max Delta = 10 mOhm
14.	Nanosecond Event Detection (Random Vibration) (5) - Non Standard

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

(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 at 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) Number of Cycles: 5
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-364-31C, *Humidity Test Procedure for Electrical Connectors.*
2) Test Condition C, 500 Hours.
3) Method III, +25° C to + 65° C, 80%RH to 98%RH.
4) All samples are pre-conditioned at ambient.
5) 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: H
3) Peak Value: 30 G
4) Duration: 11 Milliseconds
5) Wave Form: Half Sine
6) Number of Shocks: 3 Per Direction, Per Axis (18 Total)

VIBRATION:

1) Reference document: EIA-364-28, *Vibration Test Procedure for Electrical Connectors*
2) Test Condition V, Letter A
3) Power Spectral Density: 0.02 G^2 / 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 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.

LLCR:

1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
3) The following guidelines are used to categorize the changes in LLCR as a result from stressing
    a. <= +5.0 mOhms: ----------Stable
    b. +5.0 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

Samtec to Samtec

- **Initial**
  - **Mating**
    - **Min ----------27.57 lbs**
    - **Max----------28.13 lbs**
  - **Unmating**
    - **Min ----------24.16 lbs**
    - **Max----------25.56 lbs**
- **After Humidity**
  - **Mating**
    - **Min ----------25.92 lbs**
    - **Max----------27.61 lbs**
  - **Unmating**
    - **Min ----------22.54 lbs**
    - **Max----------22.82 lbs**

Amphenol-RA to Samtec-VT

- **Initial**
  - **Mating**
    - **Min ----------38.36 lbs**
    - **Max----------42.23 lbs**
  - **Unmating**
    - **Min ----------29.12 lbs**
    - **Max----------30.13 lbs**
- **After Humidity**
  - **Mating**
    - **Min ----------36.40 lbs**
    - **Max----------40.24 lbs**
  - **Unmating**
    - **Min ----------31.88 lbs**
    - **Max----------34.07 lbs**

Samtec-RA to Amphenol-VT

- **Initial**
  - **Mating**
    - **Min ----------23.23 lbs**
    - **Max----------23.55 lbs**
  - **Unmating**
    - **Min ----------17.03 lbs**
    - **Max----------18.89 lbs**
- **After Humidity**
  - **Mating**
    - **Min ----------19.98 lbs**
    - **Max----------20.58 lbs**
  - **Unmating**
    - **Min ----------16.98 lbs**
    - **Max----------17.63 lbs**

RESULTS

Mating – Unmating Forces

Thermal Shock/Humidity/Dust/Durability Group

Amphenol to Amphenol

- **Initial**
  - **Mating**
    - **Min ----------29.46 lbs**
    - **Max----------30.46 lbs**
  - **Unmating**
    - **Min ----------19.56 lbs**
    - **Max----------21.14 lbs**
- **After Humidity**
  - **Mating**
    - **Min ----------27.20 lbs**
    - **Max----------27.75 lbs**
  - **Unmating**
    - **Min ----------20.47 lbs**
    - **Max----------21.02 lbs**

Temperature Life Group

Samtec to Samtec

- **Initial**
  - **Mating**
    - **Min ----------28.13 lbs**
    - **Max----------28.25 lbs**
  - **Unmating**
    - **Min ----------22.65 lbs**
    - **Max----------23.33 lbs**
- **After Thermal**
  - **Mating**
    - **Min ----------19.61 lbs**
    - **Max----------19.69 lbs**
  - **Unmating**
    - **Min ----------16.10 lbs**
    - **Max----------16.96 lbs**

Amphenol-RA to Samtec-VT

- **Initial**
  - **Mating**
    - **Min ----------38.54 lbs**
    - **Max----------39.34 lbs**
  - **Unmating**
    - **Min ----------28.61 lbs**
    - **Max----------32.09 lbs**
- **After Thermal**
  - **Mating**
    - **Min ----------25.96 lbs**
    - **Max----------26.60 lbs**
  - **Unmating**
    - **Min ----------22.31 lbs**
    - **Max----------24.08 lbs**

RESULTS Continued

Mating – Unmating Forces

Temperature Life Group

Samtec-RA to Amphenol-VT

- **Initial**
  - **Mating**
    - **Min ----------22.56 lbs**
    - **Max----------23.12 lbs**
  - **Unmating**
    - **Min ----------18.89 lbs**
    - **Max----------19.72 lbs**
- **After Thermal**
  - **Mating**
    - **Min ----------15.94 lbs**
    - **Max----------16.01 lbs**
  - **Unmating**
    - **Min ----------13.59 lbs**
    - **Max----------13.79 lbs**

Amphenol to Amphenol

- **Initial**
  - **Mating**
    - **Min ----------29.24 lbs**
    - **Max----------29.38 lbs**
  - **Unmating**
    - **Min ----------18.86 lbs**
    - **Max----------20.55 lbs**
- **After Thermal**
  - **Mating**
    - **Min ----------19.96 lbs**
    - **Max----------20.51 lbs**
  - **Unmating**
    - **Min ----------16.62 lbs**
    - **Max----------16.63 lbs**

RESULTS Continued

Mating – Unmating Forces

Vibration And Mechanical Shock With Durability Group

Samtec to Samtec

- **Initial**
  - **Mating**
    - **Min ----------28.13 lbs**
    - **Max----------28.25 lbs**
  - **Unmating**
    - **Min ----------22.65 lbs**
    - **Max----------23.33 lbs**
- **After Thermal**
  - **Mating**
    - **Min ----------19.61 lbs**
    - **Max----------19.69 lbs**
  - **Unmating**
    - **Min ----------16.10 lbs**
    - **Max----------16.96 lbs**

Amphenol-RA to Samtec-VT

- **Initial**
  - **Mating**
    - **Min ----------38.54 lbs**
    - **Max----------39.34 lbs**
  - **Unmating**
    - **Min ----------28.61 lbs**
    - **Max----------32.09 lbs**
- **After Thermal**
  - **Mating**
    - **Min ----------25.96 lbs**
    - **Max----------26.60 lbs**
  - **Unmating**
    - **Min ----------22.31 lbs**
    - **Max----------24.08 lbs**

Samtec-RA to Amphenol-VT

- **Initial**
  - **Mating**
    - **Min ----------22.56 lbs**
    - **Max----------23.12 lbs**
  - **Unmating**
    - **Min ----------18.89 lbs**
    - **Max----------19.72 lbs**
- **After Thermal**
  - **Mating**
    - **Min ----------15.94 lbs**
    - **Max----------16.01 lbs**
  - **Unmating**
    - **Min ----------13.59 lbs**
    - **Max----------13.79 lbs**

RESULTS Continued

Mating – Unmating Forces

Vibration And Mechanical Shock With Durability Group

Amphenol to Amphenol

- **Initial**
  - **Mating**
    - **Min ----------29.24 lbs**
    - **Max----------29.38 lbs**
  - **Unmating**
    - **Min ----------18.86 lbs**
    - **Max----------20.55 lbs**
- **After Thermal**
  - **Mating**
    - **Min ----------19.96 lbs**
    - **Max----------20.51 lbs**
  - **Unmating**
    - **Min ----------16.62 lbs**
    - **Max----------16.63 lbs**

RESULTS Continued

LLCR Temperature Life Group (218 signal and 110 ground LLCR test points)

Samtec to Samtec

Signal Pin

- **Initial ---------- 17.36 mOhms Max**
- **Thermal Aging**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **1 cycle**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 13.53 mOhms Max**
- **Thermal Aging**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **1 cycle**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

RESULTS Continued

LLCR Temperature Life Group (218 signal and 110 ground LLCR test points)

Amphenol-RA to Samtec-VT

Signal Pin

- **Initial ---------- 18.05 mOhms Max**
- **Thermal Aging**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **1 cycle**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 15.80 mOhms Max**
- **Thermal Aging**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **1 cycle**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

RESULTS Continued

LLCR Temperature Life Group (218 signal and 110 ground LLCR test points)

Samtec-RA to Amphenol-VT

Signal Pin

- **Initial ---------- 19.58 mOhms Max**
- **Thermal Aging**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **1 cycle**
  - **<= +5.0 mOhms ---------- 200 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ---------- 13 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 5 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 13.12 mOhms Max**
- **Thermal Aging**
  - **<= +5.0 mOhms ---------- 108 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 1 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 1 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **1 cycle**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

RESULTS Continued

LLCR Temperature Life Group (218 signal and 110 ground LLCR test points)

Amphenol to Amphenol

Signal Pin

- **Initial ---------- 18.40 mOhms Max**
- **Thermal Aging**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **1 cycle**
  - **<= +5.0 mOhms ---------- 202 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ---------- 9 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 7 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 15.25 mOhms Max**
- **Thermal Aging**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **1 cycle**
  - **<= +5.0 mOhms ---------- 107 Points ---------- Stable**
  - **+5.1 to +7.5 mOhms ---------- 1 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 2 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

RESULTS Continued

LLCR Thermal Shock/Humidity/Dust/Durability Group (218 signal and 110 ground LLCR test points)

Samtec to Samtec

Signal Pin

- **Initial ---------- 17.49 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Dust**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Thermal**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

RESULTS Continued

Ground Pin

- **Initial ---------- 13.10 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Dust**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Thermal**
  - **<= +5.0 mOhms ---------- 109 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 1 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

RESULTS Continued

LLCR Thermal Shock/Humidity/Dust/Durability Group (218 signal and 110 ground LLCR test points)

Amphenol-RA to Samtec-VT

Signal Pin

- **Initial ---------- 18.23 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Dust**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Thermal**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

RESULTS Continued

Ground Pin

- **Initial ---------- 13.76 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Dust**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Thermal**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

RESULTS Continued

LLCR Thermal Shock/Humidity/Dust/Durability Group (218 signal and 110 ground LLCR test points)

Samtec-RA to Amphenol-VT

Signal Pin

- **Initial ---------- 18.00 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Dust**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Thermal**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

RESULTS Continued

Ground Pin

- **Initial ---------- 12.56 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Dust**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Thermal**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

RESULTS Continued

LLCR Thermal Shock/Humidity/Dust/Durability Group (218 signal and 110 ground LLCR test points)

Amphenol to Amphenol

Signal Pin

- **Initial ---------- 18.37 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Dust**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Thermal**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

RESULTS Continued

Ground Pin

- **Initial ---------- 15.30 mOhms Max**
- **Durability, 250 Cycles**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Dust**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Thermal**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Humidity**
  - **<= +5.0 mOhms ---------- 110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

RESULTS Continued

LLCR Vibration And Mechanical Shock With Durability Group (218 signal and 110 ground LLCR test points)

Samtec to Samtec

Signal Pin

- **Initial ---------- 18.03 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock X**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Y**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Z**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe X**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe Y**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe Z**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 13.76 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock X**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Y**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Z**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe X**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe Y**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

- **Vibe Z**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 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 (218 signal and 110 ground LLCR test points)

Amphenol-RA to Samtec-VT

Signal Pin

- **Initial ---------- 18.87 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock X**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock Y**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock Z**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe X**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe Y**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe Z**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 14.27 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock X**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Y**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Z**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe X**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe Y**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

- **Vibe Z**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 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 (218 signal and 110 ground LLCR test points)

Samtec-RA to Amphenol -VT

Signal Pin

- **Initial ---------- 18.54 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock X**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock Y**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock Z**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe X**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe Y**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe Z**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 13.41 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock X**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Y**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Z**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe X**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe Y**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

- **Vibe Z**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 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 (218 signal and 110 ground LLCR test points)

Amphenol to Amphenol

Signal Pin

- **Initial ---------- 18.36 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock X**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock Y**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Shock Z**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe X**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe Y**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**
- **Vibe Z**
  - **<= +5.0 mOhms ---------- 218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ---------- 0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms ---------- 0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ---------- 0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms ---------- 0 Points ---------- Unstable**
  - **>+1000 mOhms ---------- 0 Points ---------- Open Failure**

- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------218 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

Ground Pin

- **Initial ---------- 13.21 mOhms Max**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock X**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Y**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Shock Z**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe X**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Vibe Y**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**

- **Vibe Z**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 to +1000 mOhms----------0 Points ---------- Unstable**
  - **>+1000 mOhms----------0 Points ---------- Open Failure**
- **Durability, 100 Cycles**
  - **<= +5.0 mOhms----------110 Points ---------- Stable**
  - **+5.0 to +7.5 mOhms ----------0 Points ---------- Minor**
  - **+7.5 to +10.0 mOhms----------0 Points ---------- Acceptable**
  - **+10.0 to +50.0 mOhms ----------0 Points ---------- Marginal**
  - **+50.0 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:

Temperature Life Group

Samtec to Samtec

	Initial				After Thermals			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	125.10	28.13	100.74	22.65	87.22	19.61	71.62	16.10
Maximum	125.67	28.25	103.77	23.33	87.59	19.69	75.44	16.96
Average	125.39	**28.19**	102.26	**22.99**	87.41	**19.65**	73.53	**16.53**
St Dev	0.40	0.09	2.15	0.48	0.27	0.06	2.70	0.61
Count	2	2	2	2	2	2	2	2

Amphenol-RA to Samtec-VT

	Initial				After Thermals			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	171.43	38.54	127.28	28.61	115.46	25.96	99.22	22.31
Maximum	174.99	39.34	142.72	32.09	118.30	26.60	107.09	24.08
Average	173.21	**38.94**	135.00	**30.35**	116.88	**26.28**	103.15	**23.19**
St Dev	2.52	0.57	10.92	2.46	2.01	0.45	5.56	1.25
Count	2	2	2	2	2	2	2	2

Samtec-RA to Amphenol-VT

	Initial				After Thermals			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	100.36	22.56	84.03	18.89	70.88	15.94	60.44	13.59
Maximum	102.82	23.12	87.71	19.72	71.20	16.01	61.32	13.79
Average	101.59	**22.84**	85.87	**19.31**	71.04	**15.97**	60.88	**13.69**
St Dev	1.74	0.39	2.61	0.59	0.23	0.05	0.63	0.14
Count	2	2	2	2	2	2	2	2

Amphenol to Amphenol

	Initial				After Thermals			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	130.06	29.24	83.88	18.86	88.77	19.96	73.93	16.62
Maximum	130.69	29.38	91.41	20.55	91.22	20.51	73.96	16.63
Average	130.37	**29.31**	87.64	**19.70**	89.99	**20.23**	73.95	**16.63**
St Dev	0.44	0.10	5.32	1.20	1.73	0.39	0.02	0.00
Count	2	2	2	2	2	2	2	2

DATA SUMMARIES Continued

MATING/UNMATING:

Thermal Shock/Humidity/Dust/Durability Group

Samtec to Samtec

	Initial				After Humidity			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	122.62	27.57	107.46	24.16	115.28	25.92	100.24	22.54
Maximum	125.11	28.13	113.67	25.56	122.81	27.61	101.50	22.82
Average	123.87	**27.85**	110.57	**24.86**	119.04	**26.76**	100.87	**22.68**
St Dev	1.76	0.40	4.39	0.99	5.32	1.20	0.89	0.20
Count	2	2	2	2	2	2	2	2

Amphenol-RA to Samtec-VT

	Initial				After Humidity			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	170.63	38.36	129.53	29.12	161.92	36.40	141.80	31.88
Maximum	187.86	42.23	134.04	30.13	179.00	40.24	151.54	34.07
Average	179.24	**40.30**	131.79	**29.63**	170.46	**38.32**	146.67	**32.98**
St Dev	12.18	2.74	3.18	0.72	12.07	2.71	6.89	1.55
Count	2	2	2	2	2	2	2	2

Samtec-RA to Amphenol-VT

	Initial				After Humidity			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	103.33	23.23	75.75	17.03	88.87	19.98	75.53	16.98
Maximum	104.75	23.55	84.02	18.89	91.54	20.58	78.42	17.63
Average	104.04	**23.39**	79.89	**17.96**	90.21	**20.28**	76.97	**17.31**
St Dev	1.01	0.23	5.85	1.32	1.89	0.42	2.04	0.46
Count	2	2	2	2	2	2	2	2

Amphenol to Amphenol

	Initial				After Humidity			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	131.03	29.46	86.99	19.56	121.00	27.20	91.04	20.47
Maximum	135.46	30.46	94.01	21.14	123.43	27.75	93.51	21.02
Average	133.25	**29.96**	90.50	**20.35**	122.22	**27.48**	92.28	**20.75**
St Dev	3.14	0.70	4.97	1.12	1.71	0.39	1.75	0.39
Count	2	2	2	2	2	2	2	2

DATA SUMMARIES

MATING/UNMATING:

Vibration And Mechanical Shock With Durability Group

Samtec to Samtec

	Initial				After 100 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	124.77	28.05	101.64	22.85	177.45	39.90	137.48	30.91
Maximum	125.95	28.32	109.26	24.56	178.14	40.05	139.98	31.47
Average	125.36	**28.18**	105.45	**23.71**	177.80	**39.97**	138.73	**31.19**
St Dev	0.84	0.19	5.39	1.21	0.48	0.11	1.77	0.40
Count	2	2	2	2	2	2	2	2

Amphenol-RA to Samtec-VT

	Initial				After 100 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	173.76	39.06	145.00	32.60	217.63	48.93	191.29	43.01
Maximum	184.98	41.59	153.89	34.60	228.47	51.37	205.69	46.24
Average	179.37	**40.33**	149.45	**33.60**	223.05	**50.15**	198.49	**44.63**
St Dev	7.94	1.78	6.28	1.41	7.67	1.72	10.18	2.29
Count	2	2	2	2	2	2	2	2

Samtec-RA to Amphenol-VT

	Initial				After 100 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	107.05	24.07	73.98	16.63	169.19	38.04	137.30	30.87
Maximum	111.08	24.97	78.74	17.70	175.14	39.38	137.51	30.92
Average	109.07	**24.52**	76.36	**17.17**	172.17	**38.71**	137.40	**30.89**
St Dev	2.85	0.64	3.37	0.76	4.21	0.95	0.15	0.03
Count	2	2	2	2	2	2	2	2

Amphenol to Amphenol

	Initial				After 100 Cycles			
	Mating		**Unmating**		**Mating**		**Unmating**	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	125.30	28.17	90.49	20.35	203.39	45.73	153.44	34.50
Maximum	137.74	30.97	91.30	20.53	219.23	49.29	156.30	35.14
Average	131.52	**29.57**	90.89	**20.44**	211.31	**47.51**	154.87	**34.82**
St Dev	8.80	1.98	0.57	0.13	11.20	2.52	2.02	0.45
Count	2	2	2	2	2	2	2	2

DATA SUMMARIES Continued

LLCR Thermal Shock/Humidity/Dust/Durability Group:

1) A total of 218 signal and 110 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. <= +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

Samtec to Samtec

	LLCR Measurement Summaries by Pin Type				
Date	10/18/2018	10/31/2018	11/12/2018	11/19/2018	12/11/2018
Room Temp (Deg C)	23	23	22	23	23
Rel Humidity (%)	36	46	35	38	35
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**
Samtec to Samtec	**Pin Type 1: Signal**				
Average	13.99	0.38	0.31	0.47	0.45
St. Dev.	2.01	0.52	0.27	0.64	0.46
Min	10.11	0.00	0.00	0.00	0.00
Max	17.49	3.21	1.88	4.19	3.25
Summary Count	218	218	218	218	218
Total Count	218	218	218	218	282
	Pin Type 2: Ground				
Average	11.24	0.64	0.47	0.67	0.71
St. Dev.	1.02	0.64	0.46	0.78	0.55
Min	8.00	0.00	0.01	0.01	0.02
Max	13.10	3.22	3.40	5.80	3.51
Summary Count	110	110	110	110	110
Total Count	110	110	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
250 Cycles	**328**	**0**	**0**	**0**	**0**	**0**
Dust	**328**	**0**	**0**	**0**	**0**	**0**
Thermal Shock	**327**	**1**	**0**	**0**	**0**	**0**
Humidity	**328**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Amphenol-RA to Samtec-VT

	LLCR Measurement Summaries by Pin Type				
Date	10/18/2018	11/1/2018	11/12/2018	11/19/2018	12/12/2018
Room Temp (Deg C)	23	23	22	23	23
Rel Humidity (%)	36	46	35	38	36
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**
Amp-RA to Samtec-VT	**Pin Type 1: Signal**				
Average	14.35	0.38	0.36	0.55	0.39
St. Dev.	2.20	0.43	0.35	0.65	0.34
Min	10.28	0.00	0.00	0.00	0.00
Max	18.23	3.43	2.59	4.10	2.33
Summary Count	218	218	218	218	218
Total Count	218	218	218	218	282
	Pin Type 2: Ground				
Average	11.42	0.49	0.47	0.69	0.66
St. Dev.	1.04	0.61	0.46	0.66	0.52
Min	8.58	0.01	0.00	0.01	0.00
Max	13.76	3.27	2.36	3.54	3.05
Summary Count	110	110	110	110	110
Total Count	110	110	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
250 Cycles	**328**	**0**	**0**	**0**	**0**	**0**
Dust	**328**	**0**	**0**	**0**	**0**	**0**
Thermal Shock	**328**	**0**	**0**	**0**	**0**	**0**
Humidity	**328**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Amphenol-RA to Samtec-VT

	LLCR Measurement Summaries by Pin Type				
Date	12/27/2018	12/27/2018	1/8/2019	1/15/2019	2/5/2019
Room Temp (Deg C)	23	23	22	22	23
Rel Humidity (%)	36	36	44	34	44
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**
Samtec-RA to Amp-VT	**Pin Type 1: Signal**				
Average	14.29	0.39	0.67	0.66	0.92
St. Dev.	1.94	0.33	0.44	0.41	0.71
Min	10.41	0.00	0.00	0.01	0.02
Max	18.00	2.90	2.30	2.24	4.57
Summary Count	218	218	218	218	218
Total Count	218	218	218	218	282
	Pin Type 2: Ground				
Average	10.76	0.29	0.53	0.40	0.66
St. Dev.	1.00	0.31	0.46	0.36	0.62
Min	7.96	0.00	0.00	0.00	0.00
Max	12.56	2.16	2.91	1.93	3.52
Summary Count	110	110	110	110	110
Total Count	110	110	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
250 Cycles	**328**	**0**	**0**	**0**	**0**	**0**
Dust	**328**	**0**	**0**	**0**	**0**	**0**
Thermal Shock	**328**	**0**	**0**	**0**	**0**	**0**
Humidity	**328**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Amphenol to Amphenol

	LLCR Measurement Summaries by Pin Type				
Date	10/18/2018	11/1/2018	11/12/2018	11/19/2018	12/12/2018
Room Temp (Deg C)	23	23	22	23	23
Rel Humidity (%)	36	46	35	38	36
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**
Amp to Amp	**Pin Type 1: Signal**				
Average	14.78	0.52	0.58	0.86	0.75
St. Dev.	2.16	0.57	0.40	0.61	0.37
Min	10.56	0.00	0.00	0.00	0.01
Max	18.37	3.98	3.25	4.77	1.91
Summary Count	218	218	218	218	218
Total Count	218	218	218	218	282
	Pin Type 2: Ground				
Average	11.69	0.63	0.68	1.05	0.99
St. Dev.	1.14	0.63	0.61	0.76	0.56
Min	8.90	0.01	0.01	0.00	0.09
Max	15.30	3.20	3.16	4.39	3.47
Summary Count	110	110	110	110	110
Total Count	110	110	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
250 Cycles	**328**	**0**	**0**	**0**	**0**	**0**
Dust	**328**	**0**	**0**	**0**	**0**	**0**
Thermal Shock	**328**	**0**	**0**	**0**	**0**	**0**
Humidity	**328**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

LLCR Temperature Life Group:

1) A total of 218 signal and 110 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. <= +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

Samtec to Samtec

	LLCR Measurement Summaries by Pin Type		
Date	10/22/2018	12/5/2018	12/6/2018
Room Temp (Deg C)	23	23	23
Rel Humidity (%)	34	35	35
Technician	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values	**Actual Initial**	**Delta 1000hr Thermal Age**	**Delta 1 Cycle**
Samtec to Samtec	**Pin Type 1: Signal**		
Average	14.12	0.35	0.71
St. Dev.	2.01	0.35	0.60
Min	10.09	0.00	0.02
Max	17.36	2.24	3.88
Summary Count	218	218	218
Total Count	218	218	218
	Pin Type 2: Ground		
Average	11.15	0.42	0.88
St. Dev.	1.03	0.42	0.92
Min	8.33	0.00	0.02
Max	13.53	2.55	4.64
Summary Count	110	110	110
Total Count	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
1000hr Thermal Age	**328**	**0**	**0**	**0**	**0**	**0**
1 Cycle	**328**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Amphenol-RA to Samtec-VT

	LLCR Measurement Summaries by Pin Type		
Date	10/22/2018	12/5/2018	12/6/2018
Room Temp (Deg C)	23	23	23
Rel Humidity (%)	36	35	36
Technician	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values	**Actual Initial**	**Delta 1000hrs Thermal Age**	**Delta 1 Cycle**
Amp-RA to Samtec-VT	**Pin Type 1: Signal**		
Average	14.37	0.40	0.45
St. Dev.	2.22	0.42	0.50
Min	10.20	0.00	0.01
Max	18.05	3.79	3.28
Summary Count	218	218	218
Total Count	218	218	218
	Pin Type 2: Ground		
Average	11.77	0.74	0.60
St. Dev.	1.14	0.68	0.62
Min	8.66	0.05	0.01
Max	15.80	3.54	3.22
Summary Count	110	110	110
Total Count	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
1000hrs Thermal Age	**328**	**0**	**0**	**0**	**0**	**0**
1 Cycle	**328**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Samtec-RA to Amphenol -VT

	LLCR Measurement Summaries by Pin Type		
Date	10/19/2018	12/5/2018	12/6/2018
Room Temp (Deg C)	23	23	23
Rel Humidity (%)	36	35	35
Technician	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values	**Actual Initial**	**Delta 1000hrs Thermal Age**	**Delta 1 Cycle**
Samtec-RA to Amp-VT	**Pin Type 1: Signal**		
Average	14.79	0.82	1.76
St. Dev.	2.06	0.86	1.90
Min	10.64	0.00	0.03
Max	19.58	4.62	9.56
Summary Count	218	218	218
Total Count	218	218	218
	Pin Type 2: Ground		
Average	11.03	0.72	0.94
St. Dev.	1.02	0.83	1.03
Min	8.33	0.01	0.00
Max	13.12	4.94	7.66
Summary Count	110	110	110
Total Count	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
1000hrs Thermal Age	**328**	**0**	**0**	**0**	**0**	**0**
1 Cycle	**308**	**14**	**6**	**0**	**0**	**0**

DATA SUMMARIES Continued

Amphenol to Amphenol

	LLCR Measurement Summaries by Pin Type		
Date	10/19/2018	12/5/2018	12/6/2018
Room Temp (Deg C)	23	23	23
Rel Humidity (%)	36	36	36
Technician	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values	**Actual Initial**	**Delta 1000hrs Thermal Age**	**Delta 1 Cycle**
Amphenol to Amphenol	**Pin Type 1: Signal**		
Average	14.99	0.51	1.70
St. Dev.	2.10	0.60	2.02
Min	10.40	0.00	0.01
Max	18.40	4.85	9.48
Summary Count	218	218	218
Total Count	218	218	218
	Pin Type 2: Ground		
Average	11.86	0.63	1.17
St. Dev.	1.24	0.58	1.57
Min	8.65	0.00	0.00
Max	15.25	3.01	9.47
Summary Count	110	110	110
Total Count	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
1000hrs Thermal Age	**328**	**0**	**0**	**0**	**0**	**0**
1 Cycle	**309**	**10**	**9**	**0**	**0**	**0**

DATA SUMMARIES Continued

LLCR Vibration And Mechanical Shock With Durability Group:

1). A total of 218 signal and 110 ground points were measured.
2). EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets.*
3). The following guidelines are used to categorize the changes in LLCR as a result from stressing.
   a. <= +5.0 mOhms: ----------Stable
   b. +5.1 to +10.0 mOhms: ----------Minor
   c. +10.1 to +15.0 mOhms: ----------Acceptable
   d. +15.1 to +50.0 mOhms: ----------Marginal
   e. +50.1 to +2000 mOhms ----------Unstable
   f. >+2000 mOhms: ----------Open Failure

Samtec to Samtec

LLCR Measurement Summaries by Pin Type										
Date	10/22/2018	11/1/2018	11/12/2018	12/1/2018	12/3/2018	12/4/2018	12/10/2018	12/11/2018	12/14/2018	12/18/2018
Room Temp (Deg C)	23	23	22	23	23	23	23	22	23	22
Rel Humidity (%)	32	46	35	30	30	30	34	31	33	33
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values	**Actual Initial**	**Delta 100 Cycles**	**Delta Dust**	**Delta Shock X**	**Delta Shock Y**	**Delta Shock Z**	**Delta Vibe X**	**Delta Vibe Y**	**Delta Vibe Z**	**Delta 100 Cycles**
Pin Type 1: Signal										
Average	14.28	0.47	0.54	0.61	0.65	0.85	0.64	0.68	0.66	0.70
St. Dev.	2.09	0.53	0.48	0.45	0.46	0.73	0.53	0.61	0.49	0.46
Min	10.05	0.00	0.00	0.00	0.03	0.02	0.01	0.00	0.01	0.04
Max	18.03	3.76	2.89	2.85	2.82	3.73	3.06	3.80	3.00	3.24
Summary Count	218	218	218	218	218	218	218	218	218	218
Total Count	218	218	218	218	218	218	218	218	218	218
Pin Type 2: Ground										
Average	11.41	0.58	0.75	0.76	0.72	0.98	0.75	0.78	0.75	0.82
St. Dev.	1.10	0.60	0.70	0.63	0.68	0.91	0.71	0.74	0.66	0.66
Min	8.49	0.00	0.01	0.01	0.01	0.00	0.00	0.02	0.01	0.00
Max	13.76	3.77	3.21	2.97	3.17	3.53	3.12	3.29	3.15	2.98
Summary Count	110	110	110	110	110	110	110	110	110	110
Total Count	110	110	110	110	110	110	110	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
100 Cycles	**328**	**0**	**0**	**0**	**0**	**0**
Dust	**328**	**0**	**0**	**0**	**0**	**0**
Shock X	**328**	**0**	**0**	**0**	**0**	**0**
Shock Y	**328**	**0**	**0**	**0**	**0**	**0**
Shock Z	**328**	**0**	**0**	**0**	**0**	**0**
Vibe X	**328**	**0**	**0**	**0**	**0**	**0**
Vibe Y	**328**	**0**	**0**	**0**	**0**	**0**
Vibe Z	**328**	**0**	**0**	**0**	**0**	**0**
100 Cycles	**328**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

Nanosecond Event Detection:

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

DATA SUMMARIES Continued

Amphenol-RA to Samtec-VT

LLCR Measurement Summaries by Pin Type										
Date	10/22/2018	11/1/2018	11/12/2018	11/30/2018	12/3/2018	12/4/2018	12/10/2018	12/11/2018	12/14/2018	12/18/2018
Room Temp (Deg C)	23	23	23	23	22	22	23	22	22	22
Rel Humidity (%)	32	46	35	30	32	32	34	36	38	33
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values	**Actual Initial**	**Delta 100 Cycles**	**Delta Dust**	**Delta Shock X**	**Delta Shock Y**	**Delta Shock Z**	**Delta Vibe X**	**Delta Vibe Y**	**Delta Vibe Z**	**Delta 100 Cycles**
Pin Type 1: Signal										
Average	14.37	0.59	0.50	0.40	0.40	0.53	0.50	0.51	0.44	0.44
St. Dev.	2.32	0.64	0.58	0.37	0.37	0.56	0.43	0.50	0.37	0.38
Min	9.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Max	18.87	3.47	3.24	2.11	2.11	3.56	2.71	4.15	1.96	2.33
Summary Count	218	218	218	218	218	218	218	218	218	218
Total Count	218	218	218	218	218	218	218	218	218	218
Pin Type 2: Ground										
Average	11.61	0.58	0.63	0.64	0.64	0.85	0.72	0.71	0.65	0.70
St. Dev.	1.08	0.53	0.61	0.51	0.51	0.70	0.49	0.53	0.52	0.51
Min	8.89	0.01	0.00	0.01	0.01	0.02	0.01	0.00	0.00	0.01
Max	14.27	3.12	3.90	2.28	2.28	3.15	2.35	2.60	2.44	2.41
Summary Count	110	110	110	110	110	110	110	110	110	110
Total Count	110	110	110	110	110	110	110	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
100 Cycles	**328**	**0**	**0**	**0**	**0**	**0**
Dust	**328**	**0**	**0**	**0**	**0**	**0**
Shock X	**328**	**0**	**0**	**0**	**0**	**0**
Shock Y	**328**	**0**	**0**	**0**	**0**	**0**
Shock Z	**328**	**0**	**0**	**0**	**0**	**0**
Vibe X	**328**	**0**	**0**	**0**	**0**	**0**
Vibe Y	**328**	**0**	**0**	**0**	**0**	**0**
Vibe Z	**328**	**0**	**0**	**0**	**0**	**0**
100 Cycles	**328**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

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

DATA SUMMARIES Continued

Samtec-RA to Amphenol-VT

LLCR Measurement Summaries by Pin Type										
Date	10/22/2018	11/1/2018	11/12/2018	12/2/2018	12/3/2018	12/4/2018	12/10/2018	12/11/2018	12/14/2018	12/18/2018
Room Temp (Deg C)	23	23	22	23	23	23	23	23	22	22
Rel Humidity (%)	32	46	35	30	32	36	35	32	32	32
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values	**Actual Initial**	**Delta 100 Cycles**	**Delta Dust**	**Delta Shock X**	**Delta Shock Y**	**Delta Shock Z**	**Delta Vibe X**	**Delta Vibe Y**	**Delta Vibe Z**	**Delta 100 Cycles**
Pin Type 1: Signal										
Average	14.82	0.71	1.04	1.19	1.11	1.09	1.11	1.03	1.17	1.22
St. Dev.	1.90	0.57	0.68	0.69	0.66	0.70	0.71	0.69	0.71	0.67
Min	10.79	0.00	0.05	0.14	0.04	0.02	0.00	0.02	0.09	0.22
Max	18.54	3.06	3.86	4.33	4.39	4.09	4.04	3.94	3.97	4.60
Summary Count	218	218	218	218	218	218	218	218	218	218
Total Count	218	218	218	218	218	218	218	218	218	218
Pin Type 2: Ground										
Average	10.96	0.56	0.48	0.51	0.48	0.47	0.56	0.47	0.54	0.48
St. Dev.	0.97	0.73	0.40	0.40	0.38	0.36	0.53	0.41	0.43	0.40
Min	8.46	0.00	0.01	0.01	0.01	0.03	0.02	0.01	0.02	0.01
Max	13.41	3.83	1.74	2.68	2.50	2.11	3.10	2.16	2.81	2.64
Summary Count	110	110	110	110	110	110	110	110	110	110
Total Count	110	110	110	110	110	110	110	110	110	110

LLCR Delta Count by Category						
	Stable	**Minor**	**Acceptable**	**Marginal**	**Unstable**	**Open**
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
100 Cycles	**328**	**0**	**0**	**0**	**0**	**0**
Dust	**328**	**0**	**0**	**0**	**0**	**0**
Shock X	**328**	**0**	**0**	**0**	**0**	**0**
Shock Y	**328**	**0**	**0**	**0**	**0**	**0**
Shock Z	**328**	**0**	**0**	**0**	**0**	**0**
Vibe X	**328**	**0**	**0**	**0**	**0**	**0**
Vibe Y	**328**	**0**	**0**	**0**	**0**	**0**
Vibe Z	**328**	**0**	**0**	**0**	**0**	**0**
100 Cycles	**328**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

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

DATA SUMMARIES Continued

Amphenol to Amphenol

LLCR Measurement Summaries by Pin Type

Date	10/22/2018	11/2/2018	11/12/2018	12/2/2018	12/3/2018	12/5/2018	12/10/2018	12/13/2018	12/14/2018	12/17/2018
Room Temp (Deg C)	23	23	23	23	23	23	23	23	23	23
Rel Humidity (%)	32	46	35	30	35	34	34	36	38	33
Technician	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim	Aaron McKim
mOhm values	**Actual Initial**	**Delta 100 Cycles**	**Delta Dust**	**Delta Shock X**	**Delta Shock Y**	**Delta Shock Z**	**Delta Vibe X**	**Delta Vibe Y**	**Delta Vibe Z**	**Delta 100 Cycles**
	Pin Type 1: Signal									
Average	14.54	0.38	0.45	0.52	0.57	0.55	0.56	0.54	0.57	0.52
St. Dev.	2.10	0.50	0.46	0.34	0.39	0.45	0.46	0.47	0.47	0.34
Min	10.18	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
Max	18.36	3.46	3.87	1.82	3.43	4.08	3.28	4.15	4.28	1.69
Summary Count	218	218	218	218	218	218	218	218	218	218
Total Count	218	218	218	218	218	218	218	218	218	218
	Pin Type 2: Ground									
Average	11.09	0.36	0.37	0.35	0.40	0.36	0.37	0.36	0.38	0.32
St. Dev.	1.10	0.51	0.37	0.32	0.39	0.34	0.28	0.38	0.28	0.28
Min	8.45	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Max	13.21	3.48	2.70	2.17	3.20	2.23	1.67	2.52	1.53	1.65
Summary Count	110	110	110	110	110	110	110	110	110	110
Total Count	110	110	110	110	110	110	110	110	110	110

LLCR Delta Count by Category

	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	**<=5**	**>5 & <=7.5**	**>7.5 & <=10**	**>10 & <=50**	**>50 & <=1000**	**>1000**
100 Cycles	**328**	**0**	**0**	**0**	**0**	**0**
Dust	**328**	**0**	**0**	**0**	**0**	**0**
Shock X	**328**	**0**	**0**	**0**	**0**	**0**
Shock Y	**328**	**0**	**0**	**0**	**0**	**0**
Shock Z	**328**	**0**	**0**	**0**	**0**	**0**
Vibe X	**328**	**0**	**0**	**0**	**0**	**0**
Vibe Y	**328**	**0**	**0**	**0**	**0**	**0**
Vibe Z	**328**	**0**	**0**	**0**	**0**	**0**
100 Cycles	**328**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

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

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: 05/29/2018, Next Cal: 05/29/2019

Equipment #: MO-11
Description: Switch/Multimeter
Manufacturer: Keithley
Model: 3706
Serial #: 120169
Accuracy: See Manual
… Last Cal: 09/11/2018, Next Cal: 09/11/2019

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: 11/14/2018, Next Cal: 11/14/2019

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: 06/30/2018, Next Cal: 06/30/2019

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: 02/05/2018, Next Cal: 02/05/2019

Equipment #: PS-02
Description: Power Supply
Manufacturer: Hewlett-Packer
Model: 6033A
Serial #: N/A
Accuracy: See Manual
… Last Cal: NOT CALIBRATED

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: 04/22/2018, Next Cal: 04/22/2019

Equipment #: ACLM-01
Description: Accelerometer
Manufacturer: PCB Piezotronics
Model: 352C03
Serial #: 115819
Accuracy: See Manual
… Last Cal: 07/18/2018, Next Cal: 07/18/2019

Equipment #: ED-03
Description: Event Detector
Manufacturer: Analysis Tech
Model: 32EHD
Serial #: 1100604
Accuracy: See Manual
… Last Cal: 10/31/2018, Next Cal: 10/31/2019

Equipment #: MO-04
Description: Multimeter /Data Acquisition System
Manufacturer: Keithley
Model: 2700
Serial #: 0798688
Accuracy: See Manual
… Last Cal: 09/11/2018, Next Cal: 09/11/2019