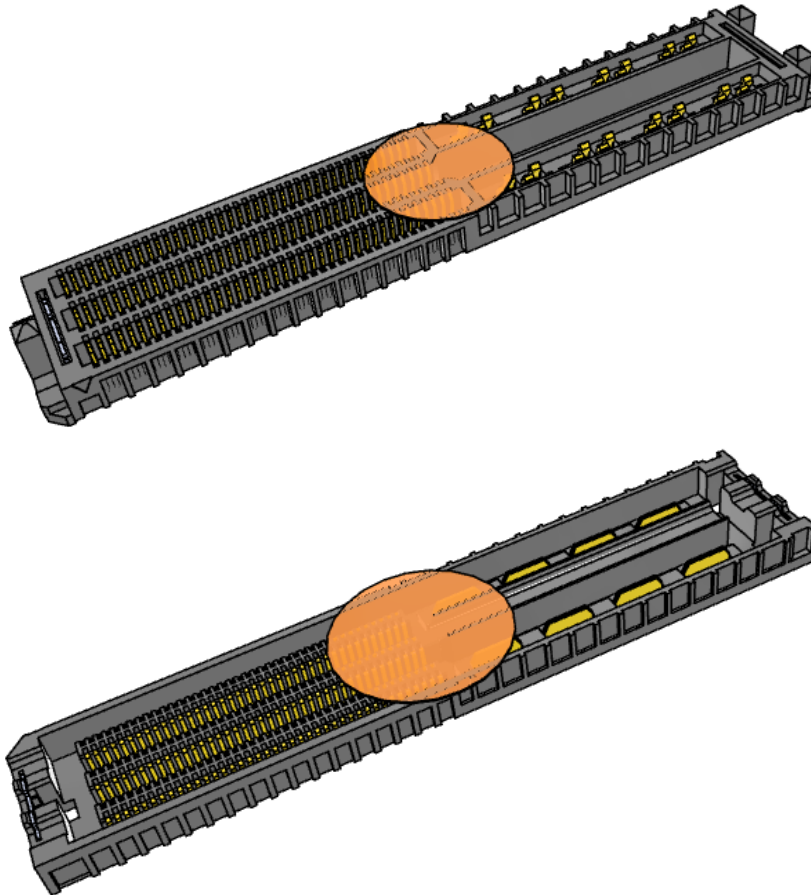




Project Number: Severe Environment Test Report	Tracking Code: CR-1182602_Report_Rev_1
Requested by: Chris Wade	Date: 6/4/2026
Part #: UDM6-40-4-01.5-S-A-TH-TR\UDF6-40-4-03.5-S-A-TH-TR	
Part description: UDM6\UDF6	Tech: Tony Wagoner, Carson Kaake
Test Start: 2/27/2026	Test Completed: 3/31/2026



SEVERE ENVIRONMENT TEST REPORT

UDM6\UDF6

UDM6-40-4-01.5-S-A-TH-TR\UDF6-40-4-03.5-S-A-TH-TR

Tracking Code: CR-1182602_Report_Rev_1	Part #: UDM6-40-4-01.5-S-A-TH-TR\UDF6-40-4-03.5-S-A-TH-TR
Part description: UDM6\UDF6	

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
6/4/2026	1	Initial Issue M\UD group test data from CR-1382901	KH

CERTIFICATION

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

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

SCOPE

To perform the following customer specified tests: Severe environment test, Please see test plan.

APPLICABLE DOCUMENTS

Standards: EIA Publication 364, MIL-STD-202G, MIL-STD-810G, VITA 47.1

TEST SAMPLES AND PREPARATION

- 1) All materials were manufactured in accordance with the applicable product specification.
- 2) All test samples were identified and encoded to maintain traceability throughout the test sequences.
- 3) After soldering, the parts to be used for LLCR and DWV/IR testing were cleaned according to TLWI-0001.
- 4) Either an automated cleaning procedure or an ultrasonic cleaning procedure may be used.
- 5) The automated procedure is used with aqueous compatible soldering materials.
- 6) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
- 7) Any additional preparation will be noted in the individual test sequences.
- 8) Solder Information: Lead free.
- 9) Samtec Test PCBs used: PCB-112899-TST, PCB-112900-TST, PCB-114056-TST.

FLOWCHARTS

Mating/Unmating/Durability

Note: From MIL-STD-810G: For chamber control purposes, 100% RH implies as close to 100% RH as possible, but not less than 95%.

Note: With Humidity (Up to 100% RH, 240 hours, 25°C to 65°C)

Group 1

UDM6-40-4-01.5-S-A-TH-TR

UDF6-40-4-03.5-S-A-TH-TR

8 Assemblies

240 Signal / 8 Power Positions

Step	Description
1.	LLCR ⁽²⁾
2.	Mating/Unmating Force ⁽³⁾
3.	Cycles Quantity = 250 Cycles
4.	LLCR ⁽²⁾ Max Delta = 15 mOhm
5.	Thermal Shock ⁽⁴⁾
6.	LLCR ⁽²⁾ Max Delta = 15 mOhm
7.	Humidity ⁽¹⁾ - Non Standard
8.	LLCR ⁽²⁾ Max Delta = 15 mOhm
9.	Mating/Unmating Force ⁽³⁾

Group 2

UDM6-10-2-01.5-S-A-TH-TR

UDF6-10-2-03.5-S-A-TH-TR

8 Assemblies

60 Signal / 4 Power Positions

Step	Description
1.	Mating/Unmating Force ⁽³⁾
2.	Cycles Quantity = 250 Cycles
3.	Mating/Unmating Force ⁽³⁾

(1) Humidity = Other

240 Hours

+25°C to +65°C @ 95% RH up to 100% RH

(2) LLCR = EIA-364-23

Open Circuit Voltage = 20 mV Max

Test Current = 100 mA Max

(3) Mating/Unmating Force = EIA-364-13

(4) Thermal Shock = EIA-364-32

Exposure Time at Temperature Extremes = 1/2 Hour

Method A, Test Condition = I (-55°C to +85°C)

Test Duration = A-3 (100 Cycles)

FLOWCHARTS Continued**Mechanical Shock/Random Vibration/LLCR**Group 1

UDM6-40-4-01.5-S-A-TH-TR

UDF6-40-4-03.5-S-A-TH-TR

8 Assemblies

VITA 47.1 (V To V)

Step	Description
1.	LLCR ⁽¹⁾
2.	Mechanical Shock ⁽²⁾ - Non Standard
3.	Random Vibration ⁽³⁾ - Non Standard
	<i>Note: Conditions:</i>
	1) 5 Hz to 100 Hz, PSD increasing at 3dB/octave
	2) 100 Hz to 1000 Hz 0.10 g ² /Hz
	3) 1000 Hz to 2000 Hz PSD decreasing at 3dB/octave
4.	LLCR ⁽¹⁾
	Max Delta = 15 mOhm

-
- (1) LLCR = EIA-364-23
Open Circuit Voltage = 20 mV Max
Test Current = 100 mA Max
- (2) Mechanical Shock = Other
40G, 11 milliseconds, Half Sine
Number of Shocks = 3 Per Direction, Per Axis, 18 Total
Operating Shock Class OS2
- (3) Random Vibration = Other
12 G 'RMS', 5Hz to 2000Hz, 1 Hours/Axis
Vibration Class V3 VITA 47.1

Mechanical Shock/Random Vibration/Event DetectionGroup 1

UDM6-40-4-01.5-S-A-TH-TR

UDF6-40-4-03.5-S-A-TH-TR

8 Assemblies

VITA 47.1 (V To V)

Step	Description
1.	Nanosecond Event Detection (Mechanical Shock) ⁽¹⁾ - Non Standard
2.	Nanosecond Event Detection (Random Vibration) ⁽²⁾ - Non Standard
	<i>Note: Conditions:</i>
	1) 5 Hz to 100 Hz, PSD increasing at 3dB/octave
	2) 100 Hz to 1000 Hz 0.10 g ² /Hz
	3) 1000 Hz to 2000 Hz PSD decreasing at 3dB/octave

-
- (1) Nanosecond Event Detection (Mechanical Shock) = Other
Use EIA-364-87 for Nanosecond Event Detection:
Test Condition = F (50 nanoseconds at 10 ohms)
40G, 11 milliseconds, Half Sine
- (2) Nanosecond Event Detection (Random Vibration) = Other
Use EIA-364-87 for Nanosecond Event Detection:
Test Condition = F (50 nanoseconds at 10 ohms)
Random Vibration: 12 G 'RMS', 5Hz to 2000Hz, 1 Hours/Axis, Vibration Class V3 VITA 47.1

FLOWCHARTS Continued**Temperature Cycling**Group 1

UDM6-40-4-01.5-S-A-TH-TR

UDF6-40-4-03.5-S-A-TH-TR

8 Assemblies

500 Thermal Cycles

*Note: Reference MIL-STD-202G, Method
107, Thermal Shock*

Step	Description
1.	Continuity (Initial)
2.	Temperature Cycles ⁽¹⁾ - Non Standard Cycles = 500 Cycles Continuity = Monitor for 1 MicroSecond Interruptions Throughout
3.	Continuity (Following Last Cycle)

(1) Temperature Cycles = Other
Max Temperature = 125° C
Min Temperature = -65° C
Dwell Time = 30 minutes at each extreme
Ramp Rate = 10° C/min
VITA 47.1

Non-Operating Class Temperature**VITA 47.1**Group 1

UDM6-40-4-01.5-S-A-TH-TR

UDF6-40-4-03.5-S-A-TH-TR

8 Assemblies

Non-Operating Class Temperature

Step	Description
1.	LLCR ⁽¹⁾ Max Delta = 15 mOhm
2.	Temperature Cycle Temperature Cycle = -55°C to 105°C Cycles = 100
3.	LLCR ⁽¹⁾ Max Delta = 15 mOhm
4.	Temperature Cycle Cycles = 100 Temperature Cycles = -65°C to 125°C
5.	LLCR ⁽¹⁾ Max Delta = 15 mOhm

(1) LLCR = EIA-364-23
Open Circuit Voltage = 20 mV Max
Test Current = 100 mA Max

FLOWCHARTS Continued

DWV @ Altitude

Pin to Pin

Group 1

UDM6-40-4-01.5-S-A-TH-TR

UDF6-40-4-03.5-S-A-TH-TR

3 Assemblies

Custom Group

Step	Description
------	-------------

- | | |
|----|--|
| 1. | DWV at Test Voltage ₍₁₎ - Non Standard
<i>Note: Test Voltage to be 300 VAC</i> |
|----|--|

Row to Row

Group 2

UDM6-40-4-01.5-S-A-TH-TR

UDF6-40-4-03.5-S-A-TH-TR

3 Assemblies

Custom Group

Step	Description
------	-------------

- | | |
|----|--|
| 1. | DWV at Test Voltage ₍₂₎ - Non Standard
<i>Note: Test Voltage to be 300 VAC</i> |
|----|--|

-
- (1) DWV at Test Voltage = Other
Test Condition IV= 70,000 ft
DWV test voltage is equal to 75% of the lowest breakdown voltage
Test voltage applied for 60 seconds
- (2) DWV at Test Voltage = Other
Test Condition IV= 70,000 ft
DWV test voltage is equal to 75% of the lowest breakdown voltage
Test voltage applied for 60 seconds

Electrostatic Discharge (ESD)

Group 1

UDM6-40-4-01.5-S-A-TH-TR

UDF6-40-4-03.5-S-A-TH-TR

8 Assemblies

EN61000-4-2

Step	Description
------	-------------

- | | |
|----|---|
| 1. | Exposure To 5kV, 10kV, 15kV,
Repeat 10 Times
<i>Note: The connector shall not be
susceptable to damage by ESD
events from 0 to 15kV as
discharged from a 150 pf capacitor
through a 330 ohm resistor.</i> |
|----|---|

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

To determine if the sockets can operate at their rated voltage and withstand momentary over potential due to switching, surges, and similar phenomenon. Separate samples are used to evaluate the effect of environmental stresses so not to influence the readings from arcing that occurs during the measurement process.

1) PROCEDURE:

- a. Reference document: other, *Withstanding Voltage Test Procedure for Electrical Connectors*.
- b. Test Conditions IV=70000 ft
- c. Test voltage applied for 60 seconds.

LLCR:

- 1) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 2) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 3) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. $\leq +5.0$ mOhms: -----Stable
 - b. $+5.1$ to $+10.0$ mOhms:-----Minor
 - c. $+10.1$ to $+15.0$ mOhms: -----Acceptable
 - d. $+15.1$ to $+50.0$ mOhms: -----Marginal
 - e. $+50.1$ to $+1000$ mOhms: -----Unstable
 - f. $>+1000$ mOhms:-----Open Failure

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.

THERMAL SHOCK:

- 1) EIA-364-32, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors*.
- 2) Test Condition 1: -55°C to $+85^{\circ}\text{C}$
- 3) Test Time: $\frac{1}{2}$ hour dwell at each temperature extreme
- 4) Number of Cycles: 100
- 5) All test samples are pre-conditioned at ambient.
- 6) All test samples are exposed to environmental stress in mated conditions.

HUMIDITY:

- 1) Reference document: Other *Humidity Test Procedure for Electrical Connectors*.
- 2) Test Time, 240 Hours.
- 3) Test Condition, $+25^{\circ}\text{C}$ to $+65^{\circ}\text{C}$, 95% to 100% Relative Humidity excluding sub-cycles 7a and 7b.
- 4) All samples are pre-conditioned at ambient.
- 5) All test samples are exposed to environmental stress in mated conditions.

ATTRIBUTE DEFINITIONS Continued

The following is a brief, simplified description of attributes.

TEMPERATURE CYCLES:

- 7) MIL-STD-202G, Method 107, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors*.
- 8) Test Condition: -65°C to +125°C.
- 9) Test Time: ½ hour dwell at each temperature extreme.
- 10) Test Duration: 500 Cycles
- 11) All test samples are pre-conditioned at ambient.
- 12) All test samples are exposed to environmental stressing in the mated condition.

TEMPERATURE CYCLES:

- 1) Other, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors*.
- 2) Test Condition: -55°C to +105°C and -65°C to +125°C.
- 3) Test Time: ½ hour dwell at each temperature extreme.
- 4) Test Duration: 100 Cycles
- 5) All test samples are pre-conditioned at ambient.
- 6) All test samples are exposed to environmental stressing in the mated condition.

MECHANICAL SHOCK (Specified Pulse):

- 1) Other, *Mechanical Shock Test Procedure for Electrical Connectors*
- 2) Peak Value: 40 G
- 3) Duration: 11 Milliseconds
- 4) Wave Form: Half Sine
- 5) Velocity: Operating Shock Class OS2
- 6) Number of Shocks: 3 Shocks / Direction, 3 Axis (18 Total)

VIBRATION:

- 1) Other method, *Vibration Test Procedure for Electrical Connectors*
- 2) G 'RMS': 12
- 3) Frequency: 5 to 2000 Hz.
- 4) Vibration Class V3 VITA 47.1
- 5) Duration: 1 Hour 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

ELECTROSTATIC DISCHARGE:

- 1) Reference Document: EN61000-4-2.
- 2) Connector shall not be susceptible to damage by electrostatic discharge (ESD) events from 0 to 15kV as discharged from a 150-pf capacitor through a 330-ohm resistor.
- 3) Any damage shall be noted.

RESULTS

Mating-Unmating Force

Group 1

- **Initial**
 - **Mating**
 - **Min** -----17.66 Lbs
 - **Max** -----21.37 Lbs
 - **Unmating**
 - **Min** -----11.52 Lbs
 - **Max** -----18.48 Lbs
- **After 250 Cycles**
 - **Mating**
 - **Min** -----17.27 Lbs
 - **Max** -----21.08 Lbs
 - **Unmating**
 - **Min** -----14.16 Lbs
 - **Max** -----17.93 Lbs
- **Humidity**
 - **Mating**
 - **Min** -----12.11 Lbs
 - **Max** -----15.87 Lbs
 - **Unmating**
 - **Min** -----8.16 Lbs
 - **Max** -----12.26 Lbs

Group 2

- **Initial**
 - **Mating**
 - **Min** -----8.22 Lbs
 - **Max** -----8.75 Lbs
 - **Unmating**
 - **Min** -----5.23 Lbs
 - **Max** -----6.61 Lbs
- **After 250 Cycles**
 - **Mating**
 - **Min** -----7.66 Lbs
 - **Max** -----8.43 Lbs
 - **Unmating**
 - **Min** -----5.99 Lbs
 - **Max** -----6.42 Lbs

RESULTS Continued**Temperature Cycling****Continuity Initial**

- No Interruptions -----Passed

Continuity Following Last 500 Cycles

- No Interruptions -----Passed

DWV @ Altitude

- **Minimums**

- Test Voltage -----300 VAC
- Altitude Tested -----70000 ft.

Pin to Pin

- DWV-----Passed

Row to Row

- DWV-----Passed

Electrostatic Discharge**5kV**

- No Damage -----Passed

10kV

- No Damage -----Passed

15kV

- No Damage -----Passed

RESULTS Continued**LLCR Mating/Unmating Durability Group (160 signals and 32 power LLCR test points)****Signal**

- **Initial** ----- 22.12 mOhms Max
- **Durability, 250 Cycles**
 - <= +5.0 mOhms ----- 160 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure
- **Thermal Shock**
 - <= +5.0 mOhms ----- 160 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure
- **Humidity**
 - <= +5.0 mOhms ----- 160 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure

Power

- **Initial** ----- 1.38 mOhms Max
- **Durability, 250 Cycles**
 - <= +5.0 mOhms ----- 32 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure
- **Thermal Shock**
 - <= +5.0 mOhms ----- 32 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure
- **Humidity**
 - <= +5.0 mOhms ----- 32 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 0 Points ----- Minor
 - +10.1 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure

RESULTS Continued**LLCR Non-Operating Class Temperature Group (160 signals and 32 power LLCR test points)****Signal**

- Initial ----- 22.33 mOhms Max
- Temperature Cycle1 (-55°C to +105°C)
 - ≤ +5.0 mOhms ----- 160 Points ----- Stable
 - +5.1 to +10 mOhms ----- 0 Points ----- Minor
 - +10 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure
- Temperature Cycle2 (-65°C to +125°C)
 - ≤ +5.0 mOhms ----- 160 Points ----- Stable
 - +5.1 to +10 mOhms ----- 0 Points ----- Minor
 - +10 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure

Power

- Initial ----- 1.29 mOhms Max
- Temperature Cycle1 (-55°C to +105°C)
 - ≤ +5.0 mOhms ----- 32 Points ----- Stable
 - +5.1 to +10 mOhms ----- 0 Points ----- Minor
 - +10 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure
- Temperature Cycle2 (-65°C to +125°C)
 - ≤ +5.0 mOhms ----- 32 Points ----- Stable
 - +5.1 to +10 mOhms ----- 0 Points ----- Minor
 - +10 to +15.0 mOhms ----- 0 Points ----- Acceptable
 - +15.1 to +50.0 mOhms ----- 0 Points ----- Marginal
 - +50.1 to +1000 mOhms ----- 0 Points ----- Unstable
 - >+1000 mOhms ----- 0 Points ----- Open Failure

RESULTS Continued**LLCR Shock & Vibration Group (160 signals and 32 power LLCR test points)****Signal**

- **Initial** ----- 25.25 mOhms Max
- **Shock & Vibration**
 - **<= +5.0 mOhms**----- 160 Points ----- Stable
 - **+5.1 to +10.0 mOhms** ----- 0 Points ----- Minor
 - **+10.1 to +15.0 mOhms** ----- 0 Points ----- Acceptable
 - **+15.1 to +50.0 mOhms** ----- 0 Points ----- Marginal
 - **+50.1 to +1000 mOhms**----- 0 Points ----- Unstable
 - **>+1000 mOhms**----- 0 Points ----- Open Failure

Power

- **Initial** ----- 1.26 mOhms Max
- **Shock & Vibration**
 - **<= +5.0 mOhms**----- 32 Points ----- Stable
 - **+5.1 to +10.0 mOhms** ----- 0 Points ----- Minor
 - **+10.1 to +15.0 mOhms** ----- 0 Points ----- Acceptable
 - **+15.1 to +50.0 mOhms** ----- 0 Points ----- Marginal
 - **+50.1 to +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 FORCE:****Group 1**

	Initial				250 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	78.55	17.66	51.24	11.52	76.82	17.27	62.98	14.16
Maximum	95.05	21.37	82.20	18.48	93.76	21.08	79.75	17.93
Average	89.81	20.19	67.65	15.21	89.19	20.05	75.30	16.93
St Dev	5.96	1.34	10.60	2.38	5.66	1.27	5.97	1.34
Count	8	8	8	8	8	8	8	8

	Humidity			
	Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	53.87	12.11	36.30	8.16
Maximum	70.59	15.87	54.53	12.26
Average	62.80	14.12	47.39	10.65
St Dev	5.00	1.12	5.97	1.34
Count	8	8	8	8

Group 2

	Initial				250 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)	Newtons	Force (Lbs)
Minimum	36.56	8.22	23.26	5.23	34.07	7.66	26.64	5.99
Maximum	38.92	8.75	29.40	6.61	37.50	8.43	28.56	6.42
Average	37.47	8.43	25.08	5.64	35.26	7.93	27.38	6.16
St Dev	0.85	0.19	2.04	0.46	1.20	0.27	0.64	0.14
Count	8	8	8	8	8	8	8	8

DATA SUMMARIES Continued**Temperature Cycling**

Temperature Cycling Event Detection Summary	
Samples tested	8 Assemblies (Samples 25-32)
Profile Used	125°/-65° (30 min dwell) 10°C/min ramp rate
Date/Time	3/31/2025 10:20am
Total Cycles for Block	50305
Maximum Number of Possible Events	1509150
Number of Recorded Events	0

DWV @ Altitude

Altitude Tested at = 70,000 feet	
Test Voltage= 300	
Pin to Pin	Row to Row
Mated	Mated
300	300
300	300
300	300

Electrostatic Discharge:

Electrostatic Discharge (ESD) Summary	
Assemblies tested	8
Test Conditions	Exposure to 5kV, 10kV, and 15kV (Repeated 10 Times)
5kV	No Damage
10kV	No Damage
15kV	No Damage
Pass/Fail	Pass

DATA SUMMARIES**LLCR Mating/Unmating Durability Group**

- 1). A total of 160 signals and 32 power points were measured.
- 2). EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3). A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4). The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. $\leq +5.0$ mOhms: -----Stable
 - b. $+5.1$ to $+10.0$ mOhms: -----Minor
 - c. $+10.1$ to $+15.0$ mOhms: -----Acceptable
 - d. $+15.1$ to $+50.0$ mOhms: -----Marginal
 - e. $+50.1$ to $+1000$ mOhms: -----Unstable
 - f. $> +1000$ mOhms: -----Open Failure

LLCR Measurement Summaries by Pin Type				
Date	2026/2/27	2026/3/3	2026/3/11	2026/3/31
Room Temp (Deg C)	22	23	22	22
Rel Humidity (%)	38	39	54	51
Technician	Carson Kaake	Carson Kaake	Tony Wagoner	Elias Rightnowar
mOhm values	Actual Initial	Delta 250 Cycles	Delta Therm Shck	Delta Humidity
Pin Type: Signal 1				
Average	19.94	0.69	0.67	0.66
St. Dev.	0.7	0.51	0.48	0.49
Min	18.49	0	0	0
Max	22.12	2.04	2.04	2.22
Summary Count	160	160	160	160
Total Count	160	160	160	160
Pin Type: Power 1				
Average	1.22	0.07	0.06	0.06
St. Dev.	0.07	0.05	0.05	0.04
Min	1.04	0	0	0.01
Max	1.38	0.25	0.17	0.15
Summary Count	32	32	32	32
Total Count	32	32	32	32

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	≤ 5	$> 5 \text{ \& } \leq 10$	$> 10 \text{ \& } \leq 15$	$> 15 \text{ \& } \leq 50$	$> 50 \text{ \& } \leq 1000$	> 1000
250 Cycles	192	0	0	0	0	0
Therm Shck	192	0	0	0	0	0
Humidity	192	0	0	0	0	0

DATA SUMMARIES Continued**LLCR Non-Operating Class Temperature Group:**

- 1) A total of 160 signals and 32 power points were measured.
- 2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. $\leq +5.0$ mOhms: -----Stable
 - b. $+5.1$ to $+10.0$ mOhms: -----Minor
 - c. $+10.1$ to $+15.0$ mOhms: -----Acceptable
 - d. $+15.1$ to $+50.0$ mOhms: -----Marginal
 - e. $+50.1$ to $+1000$ mOhms: -----Unstable
 - f. $>+1000$ mOhms: -----Open Failure

LLCR Measurement Summaries by Pin Type			
Date	2025/2/5	2025/3/3	2025/3/7
Room Temp (Deg C)	22	22	22
Rel Humidity (%)	37	36	36
Technician	Daniel Haydon	Tony Wagoner	Tony Wagoner
mOhm values	Actual	Delta	Delta
	Initial	After 1st Temp Cycle	After 2nd Temp Cycle
Pin Type: Signal 1			
Average	20.19	0.55	1.1
St. Dev.	0.53	0.45	1.09
Min	18.89	0	0
Max	22.33	2.97	4.9
Summary Count	160	160	160
Total Count	160	160	160
Pin Type: Power 1			
Average	1.14	0.09	0.04
St. Dev.	0.07	0.06	0.04
Min	1.02	0.01	0
Max	1.29	0.24	0.16
Summary Count	32	32	32
Total Count	32	32	32

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	≤ 5	$>5 \text{ \& } \leq 10$	$>10 \text{ \& } \leq 15$	$>15 \text{ \& } \leq 50$	$>50 \text{ \& } \leq 1000$	>1000
NOCT - Temperature Cycle 1	192	0	0	0	0	0
NOCT - Temperature Cycle 2	192	0	0	0	0	0

DATA SUMMARIES Continued**LLCR Shock & Vibration Group**

- 1) A total of 160 signals and 32 power points were measured.
- 2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. $\leq +5.0$ mOhms:-----Stable
 - b. $+5.1$ to $+10.0$ mOhms:-----Minor
 - c. $+10.1$ to $+15.0$ mOhms:-----Acceptable
 - d. $+15.1$ to $+50.0$ mOhms:-----Marginal
 - e. $+50.1$ to $+1000$ mOhms:-----Unstable
 - f. $>+1000$ mOhms:-----Open Failure

LLCR Measurement Summaries by Pin Type		
Date	2025/2/5	2025/2/14
Room Temp (Deg C)	22	22
Rel Humidity (%)	38	34
Technician	Daniel Haydon	Brian Stemle
mOhm values	Actual Initial	Delta Shock-Vib
Pin Type: Signal 1		
Average	20.34	0.49
St. Dev.	0.74	0.43
Min	19.04	0
Max	25.25	3.11
Summary Count	160	160
Total Count	160	160
Pin Type: Power 1		
Average	1.15	0.04
St. Dev.	0.05	0.03
Min	1.06	0
Max	1.26	0.13
Summary Count	32	32
Total Count	32	32

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	≤ 5	$>5 \text{ \& } \leq 10$	$>10 \text{ \& } \leq 15$	$>15 \text{ \& } \leq 50$	$>50 \text{ \& } \leq 1000$	>1000
Shock-Vib	192	0	0	0	0	0

Mechanical Shock & Random Vibration:

Shock and Vibration Event Detection Summary	
Contacts tested	60
Test Condition	C, 40g's, 11ms, Half-Sine
Shock Events	0
Test Condition	V-B, 12 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: 05/29/2025, Next Cal: 05/29/2026

Equipment #: MO-11**Description:** Switch/Multimeter**Manufacturer:** Keithley**Model:** 3706**Serial #:** 120169**Accuracy:** See Manual

... Last Cal: 09/11/2025, Next Cal: 09/11/2026

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: 11/14/2025, Next Cal: 05/31/2026

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: 06/30/2025, Next Cal: 06/30/2026

Equipment #: HPT-01**Description:** Hipot Safety Tester**Manufacturer:** Vitrek**Model:** V73**Serial #:** 019808**Accuracy:**

... Last Cal: 05/15/2025, Next Cal: 05/15/2026

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

... Last Cal: 04/22/2025, Next Cal: 04/22/2026

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

... Last Cal: 07/18/2025, Next Cal: 07/18/2026

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

... Last Cal: 10/31/2025, Next Cal: 10/31/2026