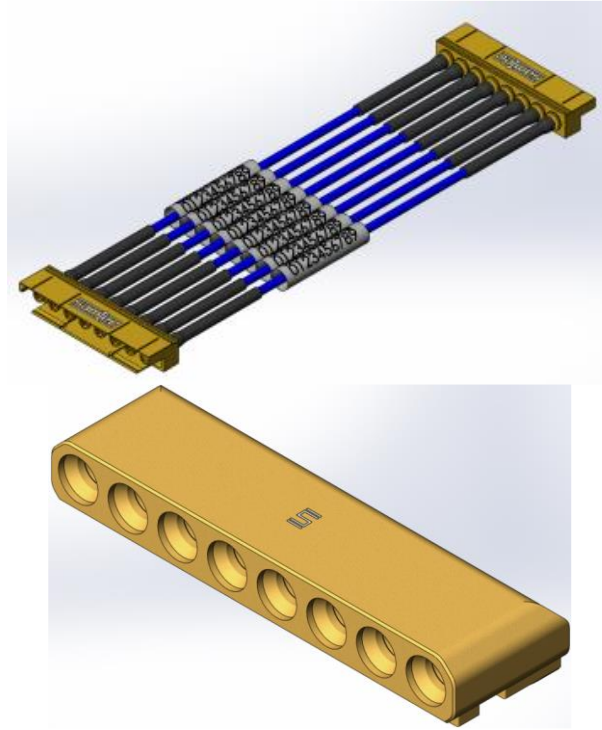




Project Number: Design Qualification Test Report	Tracking Code: CR-1054001_Report_Rev_1
Requested by: Brian Luallen	Date: 3/25/2024
Part #: GPPC-PF-1-08-EG-RA-SM\GC47-1-08-505050-0305	
Part description: GPPC\GC47	Tech: Tony Wagoner
Test Start: 3/4/2024	Test Completed: 3/22/2024



DESIGN QUALIFICATION TEST REPORT
GPPC/GC47
GPPC-PF-1-08-EG-RA-SM\GC47-1-08-505050-0305

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
3/25/2024	1	Initial Issue	KH

CERTIFICATION

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

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SCOPE

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

APPLICABLE DOCUMENTS

Standards: EIA Publication 364, MIL-PRF-39012.

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 CO-SC-WI-3029.
- 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-112837-TST

FLOWCHARTS

IR/DWV

Pin-to-Ground

Group 1

GPPC-PF-1-08-EG-RA-SM
 GC47-1-08-505050-0305
 5 Assemblies

*Note: CONNECTORS TESTED AFTER
 SOLDERED TO BOARD*

*Note: Use 2 parts for initial breakdown
 and remaining 3 parts for IR/DWV.*

Step	Description
1.	DWV at Test Voltage (1) - Non Standard Test Voltage = 325 V
2.	DWV Breakdown (2) - Non Standard
3.	IR (3) - Non Standard

-
- (1) DWV at Test Voltage = Other
 325 Vrms min. at sea level per DSCC 10019.
 Test voltage applied for 60 seconds. PER DSCC-10019 AND MIL-PRF-39012 (PARA 4.6.14)
 - (2) DWV Breakdown = Other
 Record breakdown voltage. (Data only)
 MIL-PRF-39012, Para 4.6.14
 - (3) IR = Other
 5000 megohms min per DSCC 10019 and MIL-STD-202-302.
 MIL-PRF-39012, Para 4.6.8, Test Condition A

FLOWCHARTS Continued

Mechanical Shock/Random Vibration/Event Detection

Group 1

GPPC-PF-1-08-EG-RA-SM

GC47-1-08-505050-0305

5 Assemblies

*Note: CONNECTORS TESTED AFTER
SOLDERED TO BOARD*

Step	Description
1.	LLCR ⁽¹⁾ - Non Standard MAX DELTA = 15 mOhm
2.	Mechanical Shock <i>Note: MIL-STD-202, Method 213, Test Condition H. EXCEPTION - 50 ns max. electrical interruption.</i>
3.	Nanosecond Event Detection (Mechanical Shock) ⁽²⁾ - Non Standard
4.	High Frequency Vibration <i>Note: MIL-STD-202-204, Test Condition D per DSCC 10019. EXCPETION - 50 ns max. electrical interruption.</i>
5.	Nanosecond Event Detection (Random Vibration) ⁽³⁾ - Non Standard
6.	LLCR ⁽¹⁾ - Non Standard MAX DELTA = 15 mOhm

(1) LLCR = EIA-364-23

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

(2) Nanosecond Event Detection (Mechanical Shock) = Other

Test condition H per DSCC 10019 (75 g). EXCEPTION: 50 ns max. electrical interruption.
MIL-STD-202-213

(3) Nanosecond Event Detection (Random Vibration) = Other

MIL-STD-202-204
Test condition D per DSCC 10019 (15 minutes min.). EXCEPTION - 50 ns max. electrical interruption.

FLOWCHARTS Continued

Pull/Shear

<u>Group 1</u> GPPC-PF-1-02-EG-RA-SM	<u>Group 2</u> GPPC-PF-1-08-EG-RA-SM												
6 Assemblies 1x2	6 Assemblies 1x8												
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Step</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">1.</td> <td>Connector Pull <i>Note: 3 PIECES. PULL PERPENDICULAR TO BOARD. RECORD FAILURE FORCE.</i></td> </tr> <tr> <td style="vertical-align: top;">2.</td> <td>Connector Shear <i>Note: 3 PIECES. SHEAR FORCE INTO INTERFACE. RECORD FAILURE FORCE.</i></td> </tr> </tbody> </table>	Step	Description	1.	Connector Pull <i>Note: 3 PIECES. PULL PERPENDICULAR TO BOARD. RECORD FAILURE FORCE.</i>	2.	Connector Shear <i>Note: 3 PIECES. SHEAR FORCE INTO INTERFACE. RECORD FAILURE FORCE.</i>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Step</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">1.</td> <td>Connector Pull <i>Note: 3 PIECES. PULL PERPENDICULAR TO BOARD. RECORD FAILURE FORCE.</i></td> </tr> <tr> <td style="vertical-align: top;">2.</td> <td>Connector Shear <i>Note: 3 PIECES. SHEAR FORCE INTO INTERFACE. RECORD FAILURE FORCE.</i></td> </tr> </tbody> </table>	Step	Description	1.	Connector Pull <i>Note: 3 PIECES. PULL PERPENDICULAR TO BOARD. RECORD FAILURE FORCE.</i>	2.	Connector Shear <i>Note: 3 PIECES. SHEAR FORCE INTO INTERFACE. RECORD FAILURE FORCE.</i>
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Step	Description												
1.	Connector Pull <i>Note: 3 PIECES. PULL PERPENDICULAR TO BOARD. RECORD FAILURE FORCE.</i>												
2.	Connector Shear <i>Note: 3 PIECES. SHEAR FORCE INTO INTERFACE. RECORD FAILURE FORCE.</i>												

Thermal Shock / Contact Resistance

Group 1
GPPC-PF-1-08-EG-RA-SM
GC47-1-08-505050-0305
5 Assemblies

*Note: CONNECTORS TESTED AFTER
SOLDERED TO BOARD*

Step	Description
1.	LLCR (2) - Non Standard <i>Note: INITIAL</i>
2.	Thermal Shock (3) - Non Standard
3.	LLCR (2) - Non Standard MAX DELTA = 15 mOhm
4.	IR (1) - Non Standard

(1) IR = Other
5000 megohms min per DSCC 10019 and MIL-STD-202-302.
MIL-PRF-39012, Para 4.6.8, Test Condition A

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

(3) Thermal Shock = Other
MIL-STD-202-107
Test condition B per DSCC 10019. 5 cycles. Exception - high temperature to be +165°C. Low Temp = -65°C. Visual inspection for damage.

FLOWCHARTS Continued**Mate / Unmate Durability**Group 1

GPPC-PF-1-08-EG-RA-SM

GC47-1-08-505050-0305

5 Assemblies

1x8 - Full Detent

Step	Description
1.	LLCR (1) <i>Note: INITIAL</i>
2.	Mating/Unmating Force (2)
3.	Cycles Quantity = 50 Cycles
4.	Mating/Unmating Force (2)
5.	Cycles Quantity = 50 Cycles
6.	Mating/Unmating Force (2)
7.	LLCR (1) Max Delta = 15 mOhm

(1) LLCR = EIA-364-23

Open Circuit Voltage = 20 mV Max

Test Current = 100 mA Max

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

Interface GagingGroup 1

GPPC-PF-1-08-EG-RA-SM

GC47-1-08-505050-0305

5 Assemblies

Step	Description
1.	Interface Gaging <i>Note: Prior to Center Contact Retention take a baseline interface reading, record measurement.</i>
2.	Center Contact Retention <i>Note: 1.5 pounds (24 oz.) (.002 max. contact movement). Contact movement change can be measured from any body reference surface (delta = before - after).</i>
3.	Interface Gaging <i>Note: After Contact Retention remeasure interface and record measurement.</i>

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

THERMAL SHOCK:

- 1) MIL-STD-202-107, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors*.
- 2) Test Condition B per DSCC 10019. Exception – high temperature to be +165° C. Low Temp= -65° C. Visual inspection for damage.
- 3) All test samples are pre-conditioned at ambient.
- 4) All test samples are exposed to environmental stressing in the mated condition.

MECHANICAL SHOCK (Specified Pulse):

- 1) Reference document: MIL-STD-202, *Mechanical Shock Test Procedure for Electrical Connectors*
- 2) Test Condition: MIL-STD-202, Method 213, Condition H per DSCC 10019(75g).

VIBRATION:

- 1) Reference document: MIL-STD-202, *Vibration Test Procedure for Electrical Connectors*
- 2) Test Condition: MIL-STD-202-204, Condition D per DSCC 10019(15 minutes min).

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

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. +5.1 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

INSULATION RESISTANCE (IR):

To determine the resistance of insulation materials to leakage of current through or on the surface of these materials when a DC potential is applied.

5000 megohms min per DSCC 10019 and MIL-STD-202-302. MIL-PRF-39012, Para 4.6.8.

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

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

- 1) Breakdown:
 - Record breakdown voltage. (Data only). MIL-PRF-39012, para 4.6.14
- 2) Test Voltage
 - a. 325 V rms min. at sea level per DSCC 10019.
 - b. Test voltage applied for 60 seconds. Per DSCC-10019 and MIL-PRF-39012, PARA 4.6.14.

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.

RESULTS

Mate/Unmate Force:

- **Initial**
 - **Mating**
 - **Min** ----- 6.37 lbs
 - **Max** ----- 7.16 lbs
 - **Unmating**
 - **Min** ----- 6.33 lbs
 - **Max** ----- 8.76 lbs
- **After 50 Cycles**
 - **Mating**
 - **Min** -----14.76 lbs
 - **Max** -----20.13 lbs
 - **Unmating**
 - **Min** -----11.15 lbs
 - **Max** -----12.37 lbs
- **After 100 Cycles**
 - **Mating**
 - **Min** -----16.28 lbs
 - **Max** -----20.56 lbs
 - **Unmating**
 - **Min** -----10.51 lbs
 - **Max** -----13.99 lbs

Connector Pull & Shear Force:

GPPC-PF-1-02-EG-RA-SM

Connector Pull force:

- **Min** -----67.98 lbs
- **Max** -----93.33 lbs

Connector Shear force:

- **Min** -----70.99 lbs
- **Max** -----75.73 lbs

GPPC-PF-1-08-EG-RA-SM

Connector Pull force:

- **Min** ----- 106.76 lbs
- **Max** ----- 117.43 lbs

Connector Shear force:

- **Min** ----- 121.17 lbs
- **Max** ----- 132.75 lbs

Interface Gaging

Initial

- **Min** ----- 0.03659 inch
- **Max** ----- 0.03754 inch

After 1.5 Pound Retention Force

- **Min** ----- 0.03641 inch
- **Max** ----- 0.03755 inch

RESULTS Continued

Insulation Resistance minimums, IR

Pin to Ground

- **Initial**
 - **Mated----- 9000 Meg Ω ----- Passed**

Pin to Ground

- **After Thermal Shock**
 - **Mated----- 9000 Meg Ω ----- Passed**

Dielectric Withstanding Voltage minimums, DWV

- **Test Voltage -----325 VAC**

Pin to Ground

- **Initial DWV -----Passed**

Pin to Ground

- **Breakdown Voltage-----885 VAC**

RESULTS Continued

LLCR Mate/Unmate Durability (5 signal and 5 ground LLCR test points)

Signal pin:

- **Initial** ----- 109.53 mOhms Max
- **Durability 100 cycles**
 - <= +5.0 mOhms ----- 5 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

Ground pin:

- **Initial** ----- 53.79 mOhms Max
- **Durability 100 cycles**
 - <= +5.0 mOhms ----- 5 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

LLCR Thermal Shock (5 signal and 5 ground LLCR test points)

Signal Pin:

- **Initial** ----- 94.84 mOhms Max
- **Thermal Shock**
 - <= +5.0 mOhms ----- 5 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

Ground Pin:

- **Initial** ----- 30.5 mOhms Max
- **Thermal Shock**
 - <= +5.0 mOhms ----- 0 Points ----- Stable
 - +5.1 to +10.0 mOhms ----- 5 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 Shock & Vibration (5 signal and 5 ground LLCR test points)

Signal Pin:

- **Initial** ----- 95.38 mOhms Max
- **Shock & Vibration**
 - <= +5.0 mOhms-----5 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

Ground Pin:

- **Initial** ----- 30.0 mOhms Max
- **Shock & Vibration**
 - <= +5.0 mOhms-----5 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

Mate/Unmate Force

	Initial				50 Cycles			
	Mating		Unmating		Mating		Unmating	
	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)	Newton	Force (Lbs)
Minimum	28.33	6.37	28.16	6.33	65.65	14.76	49.60	11.15
Maximum	31.85	7.16	38.96	8.76	89.54	20.13	55.02	12.37
Average	30.09	6.76	33.80	7.60	74.48	16.74	52.90	11.89
St Dev	1.25	0.28	4.65	1.05	9.54	2.15	2.04	0.46
Count	5	5	5	5	5	5	5	5

	100 Cycles			
	Mating		Unmating	
	Newton	Force (Lbs)	Newton	Force (Lbs)
Minimum	72.41	16.28	46.75	10.51
Maximum	91.45	20.56	62.23	13.99
Average	80.25	18.04	54.71	12.30
St Dev	7.06	1.59	5.56	1.25
Count	5	5	5	5

Connector Pull & Shear Force:

GPPC-PF-1-02-EG-RA-SM

Connector Pull

	Force (lbs)
Minimum	67.98
Maximum	93.33
Average	81.76

Connector Shear

	Force (lbs)
Minimum	70.99
Maximum	75.73
Average	72.96

GPPC-PF-1-08-EG-RA-SM

Connector Pull

	Force (lbs)
Minimum	106.76
Maximum	117.43
Average	113.39

Connector Shear

	Force (lbs)
Minimum	121.17
Maximum	132.75
Average	126.76

DATA SUMMARIES Continued

Interface Gaging

Interface Gaging (.045/.030)		
Sample	Initial	1.5 Push Force
1	0.03659	0.03643
2	0.03725	0.03737
3	0.03741	0.03755
4	0.03754	0.03740
5	0.03662	0.03641
Min	0.03659	0.03641
Max	0.03754	0.03755
Average	0.03708	0.03703

IR\DWV:

	Initial	Pin to Ground	
		<i>Mated</i>	
		GPPB / RF047A	
		IR	DWV
	Minimum	9000	325
Maximum	9000	325	
Average	9000	325	

	After Thermal Shock	Pin to Ground	
		<i>Mated</i>	
		GPPB / RF047A	
		IR	
	Minimum	9000	
Maximum	9000		
Average	9000		

BREAKDOWN:

Pin to Ground	
<i>Mated</i>	
GPPB / RF047A	
Sample#	Breakdown
1	1011
2	885

DATA SUMMARIES Continued

LLCR Mate/Unmate Durability:

- 1) A total of 5 signal and 5 ground points were measured.
- 2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. $\leq +5.0$ mOhms: -----Stable
 - b. $+5.1$ to $+10.0$ 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	2024/3/4	2024/3/22	
Room Temp (Deg C)	22	22	
Rel Humidity (%)	42	18	
Technician	Tony Wagoner	Tony Wagoner	
mOhm values	Actual	Delta	
	Initial	100 Cycles	
Pin Type: Signal 1			
Average	108.06	1.87	
St. Dev.	1.17	1.24	
Min	106.25	0.25	
Max	109.53	3.33	
Summary Count	5	5	
Total Count	5	5	
Pin Type: Signal 2			
Average	51.12	2.4	
St. Dev.	2.48	1.51	
Min	47.45	0.78	
Max	53.79	3.99	
Summary Count	5	5	
Total Count	5	5	

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	≤ 5	>5 & ≤ 10	>10 & ≤ 15	>15 & ≤ 50	>50 & ≤ 1000	>1000
After 100 Cycles	10	0	0	0	0	0

DATA SUMMARIES Continued

LLCR Thermal Shock:

- 1) A total of 5 signal and 5 ground points were measured.
- 2) EIA-364-23, *Low Level Contact Resistance Test Procedure for Electrical Connectors and Sockets*.
- 3) A computer program, *LLCR 221.exe*, ensures repeatability for data acquisition.
- 4) The following guidelines are used to categorize the changes in LLCR as a result from stressing.
 - a. $\leq +5.0$ mOhms: -----Stable
 - b. $+5.1$ to $+10.0$ 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	2024/3/4	2024/3/7	
Room Temp (Deg C)	22	22	
Rel Humidity (%)	42	41	
Technician	Tony Wagoner	Tony Wagoner	
mOhm values	Actual	Delta	
	Initial	Thermal Shock	
Pin Type: Signal 1			
Average	93.89	0.53	
St. Dev.	0.96	0.51	
Min	92.28	0.04	
Max	94.84	1.2	
Summary Count	5	5	
Total Count	5	5	
Pin Type: GND 1			
Average	29.74	5.79	
St. Dev.	0.57	0.75	
Min	29.03	5.02	
Max	30.5	7.02	
Summary Count	5	5	
Total Count	5	5	

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	≤ 5	>5 & ≤ 10	>10 & ≤ 15	>15 & ≤ 50	>50 & ≤ 1000	>1000
Thermal Shock	5	5	0	0	0	0

DATA SUMMARIES Continued

LLCR Shock & Vibration:

- 1). A total of 5 signal and 5 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. $\leq +5.0$ 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	2024/3/4	2024/3/5	
Room Temp (Deg C)	22	22	
Rel Humidity (%)	42	47	
Technician	Tony Wagoner	Tony Wagoner	
mOhm values	Actual	Delta	
	Initial	Shock-Vib	
Pin Type: Signal 1			
Average	94.42	0.32	
St. Dev.	0.71	0.23	
Min	93.38	0.07	
Max	95.38	0.62	
Summary Count	5	5	
Total Count	5	5	
Pin Type: GND 1			
Average	29.59	1.63	
St. Dev.	0.25	0.51	
Min	29.41	1.11	
Max	30	2.33	
Summary Count	5	5	
Total Count	5	5	

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

Nanosecond Event Detection:

Shock and Vibration Event Detection Summary	
Contacts tested	10
Test Condition	MIL-STD-202 Method 213 Test Condition H
Shock Events	0
Test Condition	MIL-STD-202-204 Test Condition D
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: 05/29/2023, Next Cal: 05/29/2024**Equipment #:** MO-11**Description:** Switch/Multimeter**Manufacturer:** Keithley**Model:** 3706**Serial #:** 120169**Accuracy:** See Manual

... Last Cal: 09/11/2023, Next Cal: 09/11/2024

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: 06/30/2023, Next Cal: 06/30/2024

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

... Last Cal: 05/15/2023, Next Cal: 05/15/2024

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

... Last Cal: 04/22/2023, Next Cal: 04/22/2024

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

... Last Cal: 07/18/2023, Next Cal: 07/18/2024

EQUIPMENT AND CALIBRATION SCHEDULES

Equipment #: ED-03

Description: Event Detector

Manufacturer: Analysis Tech

Model: 32EHD

Serial #: 1100604

Accuracy: See Manual

... Last Cal: 10/31/2023, Next Cal: 10/31/2024