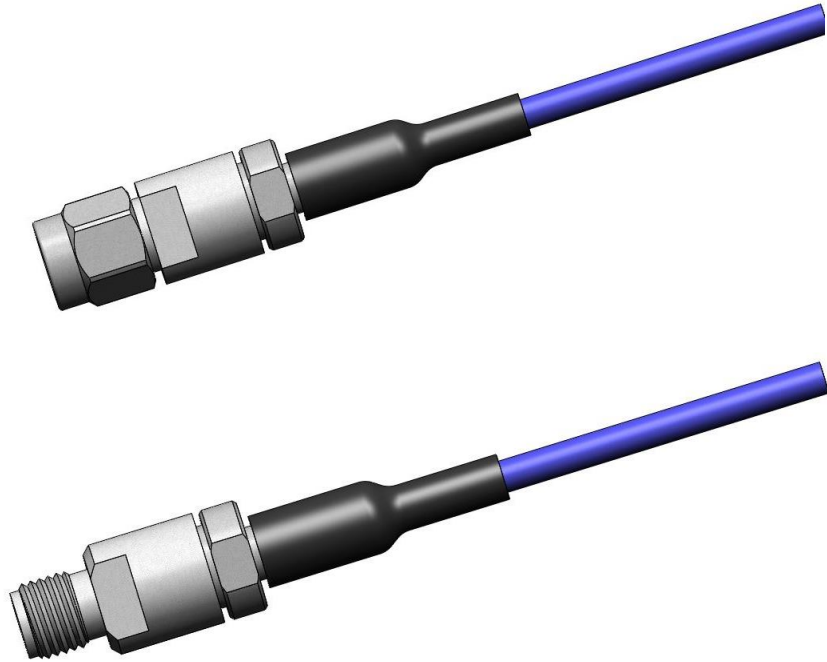




Project Number: Design Qualification Test Report	Tracking Code: 2619499_Report_Rev_1
Requested by: Jenny Chou	Date: 1/4/2021
Part #: RF086-92SP-505050-0152/RF086-92SJ-505050-0152	
Part description: RF086/RF086	Tech: Kason He
Test Start: 12/7/2020	Test Completed: 12/25/2020



**DESIGN QUALIFICATION TEST REPORT**  
**RF086/RF086**  
**RF086-92SP-505050-0152/RF086-92SJ-505050-0152**

Tracking Code: 2619499_Report_Rev_1	Part #: RF086-92SP-505050-0152/RF086-92SJ-505050-0152
Part description: RF086/RF086	

**REVISION HISTORY**

<b>DATA</b>	<b>REV.NUM.</b>	<b>DESCRIPTION</b>	<b>ENG</b>
1/4/2021	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) Parts not intended for testing LLCR and DWV/IR are visually inspected and cleaned if necessary.
- 4) Any additional preparation will be noted in the individual test sequences.

**FLOWCHARTS****Mating/Unmating/Durability**Group 1

RF086-92SP-505050-0152

RF086-92SJ-505050-0152

4 Assemblies

Step	Description
1.	Length & Mass
2.	Interface Gaging
3.	DWV at Test Voltage <sup>(1)</sup> - Non Standard DWV = 500 VAC
4.	LLCR <sup>(2)</sup> - Non Standard <i>Note: Signal and ground.</i>
5.	Cycles Quantity = 500 Cycles <i>Note: By hand. Torque each time to 8 in-lbs. Rotate plug coupling nut only. Do not rotate entire assembly. MIL-PRF-39012, Paragraph. 4.6.12</i>
6.	LLCR <sup>(2)</sup> - Non Standard Max Delta = 15 mOhm <i>Note: Signal and ground.</i>
7.	Interface Gaging

**(1) DWV at Test Voltage = Other**

Test Condition = 1 (Sea Level) Test voltage applied for 60 seconds  
MIL-PRF-39012, Paragraph. 4.6.14 per MIL-STD-202-301

**(2) LLCR = Other**

Open Circuit Voltage = 20 mV Max  
Test Current = 100 mA Max  
MIL-PRF-39012, Paragraph 4.6.13 except current to be 100mA nominal and voltage to be 20 mV maximum.

**FLOWCHARTS Continued****IR/DWV****Pin-to-Ground**Group 1

RF086-92SP-505050-1000

RF086-92SJ-505050-1000

4 Assemblies

Step	Description
1.	Length & Mass
2.	Interface Gaging
3.	IR (2) - Non Standard
4.	DWV at Test Voltage <sup>(1)</sup> - Non Standard Test Voltage = 500 VAC
5.	LLCR (3) - Non Standard <i>Note: Signal and ground.</i>
6.	Thermal Shock <sup>(4)</sup> - Non Standard
7.	IR (2) - Non Standard
8.	DWV at Test Voltage <sup>(1)</sup> - Non Standard Test Voltage = 500 VAC
9.	LLCR (3) - Non Standard Max Delta = 15 mOhm <i>Note: Signal and ground.</i>
10.	Interface Gaging

**(1) DWV at Test Voltage = Other**

Test Condition = 1 (Sea Level) Test voltage applied for 60 seconds  
MIL-PRF-39012, Paragraph. 4.6.14 per MIL-STD-202-301

**(2) IR = Other**

Test Condition = 500V DC, 2 Minutes Max  
MIL-PRF-39012, Paragraph 4.6.8 per MIL-STD-202-302

**(3) LLCR = Other**

Open Circuit Voltage = 20 mV Max  
Test Current = 100 mA Max  
MIL-PRF-39012, Paragraph 4.6.13 except current to be 100mA nominal and voltage to be 20 mV maximum.

**(4) Thermal Shock = Other**

Exposure Time at Temperature Extremes = 1/2 Hour  
Test Condition = I (-65°C to +125°C)  
Test Duration = test condition B except 10 cycles instead of 5.  
MIL-PRF-39012, Paragraph. 4.6.17 per MIL-STD-202-107

**FLOWCHARTS Continued****Cable Pull**

Group 1  
RF086-92SP-505050-0152

4 Assemblies  
0 Degrees

**Step Description**

1. Cable Retention (2) - Non Standard  
*Note: Pull-to-destruct.*

Group 2  
RF086-92SJ-505050-0152

4 Assemblies  
0 Degrees

**Step Description**

1. Cable Retention (2) - Non Standard  
*Note: Pull-to-destruct.*

Group 3  
RF086-92SP-505050-0152

RF086-92SJ-505050-0152  
4 Assemblies  
0 Degrees

**Step Description**

1. Length & Mass  
2. Interface Gaging  
3. LLCR (3) - Non Standard  
*Note: Signal and ground.*  
4. Cable Retention (1) - Non Standard  
*Note: Apply 5 pounds (2.3 kg) for Cable Retention test.*  
5. LLCR (3) - Non Standard  
*Note: Signal and ground.*  
6. Interface Gaging

**(1) Cable Retention = Other**

Apply 10 pounds (4.6 kg) for Cable Retention test.  
MIL-PRF-30192, Paragraph 4.6.21

**(2) Cable Retention = Other**

Pull-to-destruct.  
MIL-PRF-30192, Paragraph 4.6.21

**(3) LLCR = Other**

Open Circuit Voltage = 20 mV Max  
Test Current = 100 mA Max  
MIL-PRF-39012, Paragraph 4.6.13 except current to be 100mA nominal and voltage to be 20 mV maximum.

## ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

### THERMAL SHOCK:

- 1) MIL-PRF-39012, paragraph. 4.6.17 per MIL-STD-202-107.
- 2) Test Condition I: -65°C to +125°C
- 3) Test Time: ½ hour dwell at each temperature extreme
- 4) Test Duration: test condition B except 10 cycles instead of 5.
- 5) All test samples are pre-conditioned at ambient.
- 6) All test samples are exposed to environmental stressing in the mated condition.

### Cycles:

- 1) By hand. Torque each time to 8 in-lbs. Rotate plug coupling nut only. Do not rotate entire assembly. MIL-PRF-39012, paragraph. 4.6.12.

### LLCR:

- 1) MIL-PRF-39012, Paragraph 4.6.13 except current to be 100 mA nominal and voltage to be 20 mV maximum.
- 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

### CABLE RETENTION:

- 1) Apply 10 pounds (4.6 kg) for cable retention test.
- 2) Pull to destruct.
- 3) MIL-PRF-30192, paragraph. 4.6.21.

**ATTRIBUTE DEFINITIONS Continued**

The following is a brief, simplified description of attributes

**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.

- 1) PROCEDURE:
  - a. Reference document: MIL-PRF-39012, paragraph. 4.6.8 per MIL-STD-202-302.
  - b. Test Conditions:
    - i. Between Adjacent Contacts or Signal-to-Ground
    - ii. Electrification Time 2.0 minutes
    - iii. Test Voltage (500 VDC) corresponds to calibration settings for measuring resistances.
- 2) MEASUREMENTS:
- 3) When the specified test voltage is applied (VDC), the insulation resistance shall not be less than 1000 megohms.

**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) PROCEDURE:
  - a. Reference document: MIL-PRF-39012, paragraph. 4.6.14 per MIL-STD-202-301.
  - b. Test Conditions:
    - i. Between Adjacent Contacts or Signal-to-Ground
    - ii. Barometric Test Condition 1(Sea Level) Test voltage applied for 60 seconds.
    - iii. Rate of Application 500 V/Sec
    - iv. Test Voltage (VAC) until breakdown occurs
- 2) MEASUREMENTS/CALCULATIONS
  - a. The breakdown voltage shall be measured and recorded.
  - b. The dielectric withstanding voltage shall be recorded as 75% of the minimum breakdown voltage.
  - c. The working voltage shall be recorded as one-third (1/3) of the dielectric withstanding voltage (one-fourth of the breakdown voltage).

## RESULTS

### Cable Pull force

- 0° Pull

- Group 1 RF086-92SP-505050-0152

- Min -----36.07 lbs

- Max -----37.12 lbs

- Group 2 RF086-92SJ-505050-0152

- Min -----36.22 lbs

- Max -----37.80 lbs

### Insulation Resistance minimums, IR

#### Pin to Ground

- Initial

- Mated -----45000 Meg  $\Omega$  ----- Passed

- Thermal Shock

- Mated -----45000 Meg  $\Omega$  ----- Passed

### Dielectric Withstanding Voltage minimums, DWV

- Minimums

- Test Voltage -----500 VAC

#### Pin to Ground

- Initial DWV -----Passed

- Thermal DWV -----Passed

### Mating/Unmating Durability Group

#### Pin to Ground

- Initial DWV -----Passed

**RESULTS Continued****Length & Mass****Mating/Unmating Durability Group****Length****92SP**

- Min ----- 154.00 mm
- Max ----- 154.00 mm

**92SJ**

- Min ----- 154.00 mm
- Max ----- 154.00 mm

**Mass****92SP**

- Min ----- 9.65 g
- Max ----- 9.66 g

**92SJ**

- Min ----- 8.43 g
- Max ----- 8.45 g

**IR/DWV Group****Length****92SP**

- Min -----1005.00 mm
- Max -----1007.00mm

**92SJ**

- Min -----1005.00 mm
- Max -----1007.00 mm

**Mass****92SP**

- Min -----23.90 g
- Max -----23.92 g

**92SJ**

- Min -----22.68 g
- Max -----22.75 g

**Cable Pull Group****Length****92SP**

- Min ----- 154.00 mm
- Max ----- 154.00 mm

**92SJ**

- Min ----- 154.00 mm
- Max ----- 154.00 mm

**Mass****92SP**

- Min ----- 9.65 g
- Max ----- 9.69 g

**92SJ**

- Min ----- 8.42 g
- Max ----- 8.47 g

**RESULTS Continued****Interface Gaging****Mating/Unmating Durability Group****92SP****Initial**

- **Min** ----- -0.0444 mm
- **Max** ----- -0.0628 mm

**After 500 cycles**

- **Min** ----- -0.0410 mm
- **Max** ----- -0.0576 mm

**92SJ****Initial**

- **Min** ----- -0.0181 mm
- **Max** ----- -0.0410 mm

**After 500 cycles**

- **Min** ----- -0.0078 mm
- **Max** ----- -0.0366 mm

**IR/DWV Group****92SP****Initial**

- **Min** ----- -0.0436 mm
- **Max** ----- -0.0526 mm

**After Thermal Shock**

- **Min** ----- -0.0527 mm
- **Max** ----- -0.0662 mm

**92SJ****Initial**

- **Min** ----- -0.0154 mm
- **Max** ----- -0.0343 mm

**After Thermal Shock**

- **Min** ----- -0.0366 mm
- **Max** ----- -0.0605 mm

**Cable Pull Group****92SP****Initial**

- **Min** ----- -0.0418 mm
- **Max** ----- -0.0559 mm

**After Retention**

- **Min** ----- -0.0465 mm
- **Max** ----- -0.0639 mm

**92SJ****Initial**

- **Min** ----- -0.0082 mm
- **Max** ----- -0.0381 mm

**After Retention**

- **Min** ----- -0.0186 mm
- **Max** ----- -0.0413 mm

**RESULTS Continued****LLCR Mating/Unmating Durability (4 ground and 4 signal LLCR test points)****Ground pin**

- **Initial** -----9.79 mOhms Max
- **After 500 cycles**
  - **<= +5.0 mOhms**-----4 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

**Signal pin**

- **Initial** ----- 20.49 mOhms Max
- **After 500 cycles**
  - **<= +5.0 mOhms**-----4 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 IR/DWV (4 ground and 4 signal LLCR test points)****Ground pin**

- **Initial** ----- 54.81 mOhms Max
- **Thermal Shock**
  - **<= +5.0 mOhms**-----4 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

**Signal pin**

- **Initial** -----133.42 mOhms Max
- **Thermal Shock**
  - **<= +5.0 mOhms**-----4 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 Cable Pull (4 ground and 4 signal LLCR test points)**

**Ground pin**

- **Initial** -----9.03 mOhms Max
- **After 5lb Retention**
  - <= +5.0 mOhms-----4 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

**Signal pin**

- **Initial** ----- 20.7 mOhms Max
- **After 5lb Retention**
  - <= +5.0 mOhms-----4 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

**DATA SUMMARIES****INSULATION RESISTANCE (IR):**

<b>Pin to Ground</b>	
	Mated
Minimum	<b>RF086/RF086</b>
<b>Initial</b>	45000
<b>Thermal Shock</b>	45000

**DIELECTRIC WITHSTANDING VOLTAGE (DWV):**

<b>Voltage Rating Summary</b>	
Minimum	<b>RF086/RF086</b>
<b>Test Voltage</b>	500

<b>Pin to Ground</b>	
<b>Initial Test Voltage</b>	Pass
<b>After Thermal Shock Test Voltage</b>	Pass

**Mating/Unmating Durability Group**

<b>Pin to Ground</b>	
<b>Initial Test Voltage</b>	Pass

**Cable Pull Force:****0° Pull****Group 1 RF086-92SP-505050-0152**

	<b>Force (lbs)</b>
Minimum	<b>36.07</b>
Maximum	37.12
Average	36.71

**Group 2 RF086-92SJ-505050-0152**

	<b>Force (lbs)</b>
Minimum	<b>36.22</b>
Maximum	37.80
Average	36.75

**DATA SUMMARIES Continued****LENGTH & MASS****Mating/Unmating Durability Group**

92SP	Length (mm)	Mass (g)
1	154.00	9.65
2	154.00	9.66
3	154.00	9.66
4	154.00	9.66

92SJ	Length (mm)	Mass (g)
1	154.00	8.45
2	154.00	8.43
3	154.00	8.43
4	154.00	8.44

**IR/DWV Group**

92SP	Length (mm)	Mass (g)
1	1007.00	23.92
2	1005.00	23.90
3	1006.00	23.91
4	1007.00	23.92

92SJ	Length (mm)	Mass (g)
1	1006.00	22.71
2	1005.00	22.68
3	1007.00	22.75
4	1006.00	22.69

**Cable Pull Group**

Group 3		
92SP	Length (mm)	Mass (g)
1	154.0	9.650
2	154.0	9.660
3	154.0	9.670
4	154.0	9.690

Group 3		
92SJ	Length (mm)	Mass (g)
1	154.0	8.470
2	154.0	8.470
3	154.0	8.460
4	154.0	8.420

**DATA SUMMARIES Continued****INTERFACE GAGING****Mating/Unmating Durability Group**

<b>Gaging (0.00 /-0.08) (mm)</b>			
<b>92SP</b>	<b>Initial</b>	<b>Post 500 Cycles</b>	<b>Delta</b>
1	-0.0444	-0.05761	0.01325
2	-0.0521	-0.04746	0.00468
3	-0.0572	-0.04096	0.01621
4	-0.0628	-0.05703	0.00576

<b>Gaging (0.00 /-0.08) (mm)</b>			
<b>92SJ</b>	<b>Initial</b>	<b>Post 500 Cycles</b>	<b>Delta</b>
1	-0.0181	-0.0254	0.0074
2	-0.0264	-0.0078	0.0186
3	-0.0410	-0.0366	0.0045
4	-0.0334	-0.0088	0.0246

**IR/DWV Group**

<b>Gaging (0.00 /-0.08) (mm)</b>			
<b>92SP</b>	<b>Initial</b>	<b>Post Ther Shock</b>	<b>Delta</b>
1	-0.05259	-0.06615	0.01356
2	-0.04355	-0.05867	0.01512
3	-0.05194	-0.05267	0.00073
4	-0.0499	-0.06285	0.01298

<b>Gaging (0.00 /-0.08) (mm)</b>			
<b>92SJ</b>	<b>Initial</b>	<b>Post Ther Shock</b>	<b>Delta</b>
1	-0.0343	-0.06053	0.02622
2	-0.0339	-0.04592	0.01205
3	-0.0154	-0.03661	0.02126
4	-0.0263	-0.04069	0.0144

**Cable Pull Group**

<b>Gaging (0.00 /-0.08) (mm)</b>			
<b>92SP</b>	<b>Initial</b>	<b>Retention</b>	<b>Delta</b>
1	-0.05148	-0.052330	0.0009
2	-0.05588	-0.063860	0.0080
3	-0.04177	-0.046460	0.0047
4	-0.04826	-0.04769	0.0006

<b>Gaging (0.00 /-0.08) (mm)</b>			
<b>92SJ</b>	<b>Initial</b>	<b>Retention</b>	<b>Delta</b>
1	-0.0082	-0.024130	0.0160
2	-0.0181	-0.018550	0.0004
3	-0.0268	-0.040640	0.0139
4	-0.0381	-0.04132	0.0032

### DATA SUMMARIES Continued

**LLCR Durability:**

- 1) A total of 4 signal and 4 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	12/9/2020	12/17/2020		
Room Temp (Deg C)	22	22		
Rel Humidity (%)	50	50		
Technician	Kason He	Kason He		
<b>mOhm values</b>	<b>Actual</b>	<b>Delta</b>		
	<b>Initial</b>	<b>500 Cycles</b>		
Pin Type: Signal 1				
Average	20.40	0.13		
St. Dev.	0.10	0.08		
Min	20.27	0.05		
Max	20.49	0.24		
Summary Count	4	4		
Total Count	4	4		
Pin Type: GND 1				
Average	9.36	1.31		
St. Dev.	0.42	0.45		
Min	8.96	0.97		
Max	9.79	1.95		
Summary Count	4	4		
Total Count	4	4		

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	$\leq 5$	$>5 \ \& \ \leq 10$	$>10 \ \& \ \leq 15$	$>15 \ \& \ \leq 50$	$>50 \ \& \ \leq 1000$	$>1000$
After 500 Cycles	8	0	0	0	0	0

**DATA SUMMARIES Continued****LLCR IR/DWV:**

- 1) A total of 4 signal and 4 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	12/9/2020	12/16/2020		
Room Temp (Deg C)	22	22		
Rel Humidity (%)	50	50		
Technician	Kason He	Kason He		
<b>mOhm values</b>	<b>Actual</b>	<b>Delta</b>		
	<b>Initial</b>	<b>Thermal Shock</b>		
Pin Type: Signal 1				
Average	133.24	0.5525		
St. Dev.	0.1349	0.2746		
Min	133.11	0.17		
Max	133.42	0.78		
Summary Count	4	4		
Total Count	4	4		
Pin Type: GND 1				
Average	53.605	0.7025		
St. Dev.	1.1555	0.5263		
Min	52.15	0.06		
Max	54.81	1.32		
Summary Count	4	4		
Total Count	4	4		

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
mOhms	$\leq 5$	$>5$ & $\leq 10$	$>10$ & $\leq 15$	$>15$ & $\leq 50$	$>50$ & $\leq 1000$	$>1000$
After Thermal Shock	8	0	0	0	0	0

### DATA SUMMARIES Continued

**LLCR Cable Pull:**

- 1) A total of 4 signal and 4 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	12/8/2020	12/11/2020		
Room Temp (Deg C)	20	23		
Rel Humidity (%)	50	50		
Technician	Kason He	Kason He		
<b>mOhm values</b>	<b>Actual</b>	<b>Delta</b>		
	<b>Initial</b>	<b>5lb Retention</b>		
Pin Type: Signal 1				
Average	20.59	0.08		
St. Dev.	0.13	0.03		
Min	20.44	0.05		
Max	20.7	0.11		
Summary Count	4	4		
Total Count	4	4		
Pin Type: GND 1				
Average	8.77	1.08		
St. Dev.	0.21	0.85		
Min	8.58	0.48		
Max	9.03	2.05		
Summary Count	4	4		
Total Count	4	4		

LLCR Delta Count by Category						
	Stable	Minor	Acceptable	Marginal	Unstable	Open
<b>mOhms</b>	$\leq 5$	$>5 \ \& \ \leq 10$	$>10 \ \& \ \leq 15$	$>15 \ \& \ \leq 50$	$>50 \ \& \ \leq 1000$	$>1000$
<b>After 5lb Retention</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**EQUIPMENT AND CALIBRATION SCHEDULES****Equipment #:** HZ-TCT-01**Description:** Normal force analyzer**Manufacturer:** Mecmesin Multitester**Model:** Mecmesin Multitester 2.5-i**Serial #:** 08-1049-04**Accuracy:** Last Cal: 3/5/2020, Next Cal: 3/4/2021**Equipment #:** HZ-TSC-01**Description:** Vertical Thermal Shock Chamber**Manufacturer:** Cincinnatti Sub Zero**Model:** VTS-3-6-6-SC/AC**Serial #:** 10-VT14994**Accuracy:** See Manual

... Last Cal: 04/16/2020, Next Cal: 04/15/2021

**Equipment #:** DG-HPT-01**Description:** Hipot Safety Tester**Manufacturer:** Vitrek**Model:** V73**Serial #:** 025866**Accuracy:**

... Last Cal: 04/16/2020, Next Cal: 04/15/2021

**Equipment #:** HZ-MO-05**Description:** Micro-ohmmeter**Manufacturer:** Keithley**Model:** 3706**Serial #:** 1285188**Accuracy:** Last Cal: 1/2/2020, Next Cal: 1/1/2021