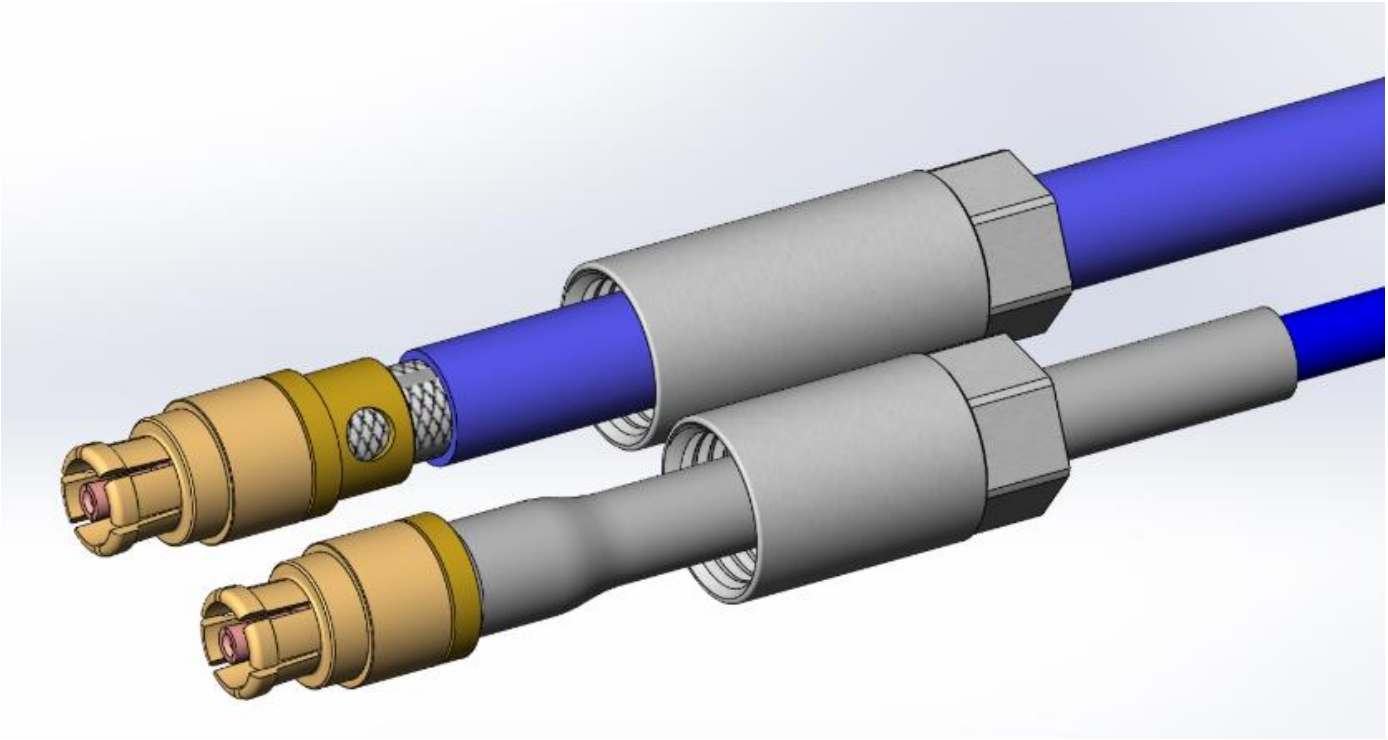
Project Number: Design Qualification Test Report	Tracking Code: CR-1192907_Report_Rev_1
Requested by: Joe Huang	Date: 8/19/2025
Part #: RF047-A-MTSJ-505050-0305/RF086-MTSJ-505050-0305	
Part description: Threaded SMPM cable assembly	Tech: Keney Chen
Test Start: 12/8/2024	Test Completed: 8/15/2025



DESIGN QUALIFICATION TEST REPORT

RF047-A-MTSJ-505050-0305/RF086-MTSJ-505050-0305
SMPMT-PF-P-EG-ST-MT-1
SMPMT-PS-P-EG-ST-MT-1

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
8/19/2025	**1**	**Initial Issue**	**KC**

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.

SCOPE

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

APPLICABLE DOCUMENTS

Standards: EIA-364 and 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

Note:
1. Avoid over-pressed during mating cycles
2. Share the result with PRFMT-J-C-EE-086-SD-1

Group 1
PRFMT-J-C-EE-047A-SD-1
AT-3007-068
5 Assemblies

Note:
A. SMPM smooth bore withdrawal
B. Disengagement force >= 0.5 lbs

Step	Description
1.	Interface Gaging *Note: Measure and record center contact recession below the body*
2.	Mating/Unmating Force (1) *Note: Record the first min. disengagement force*
3.	Cycles Quantity = 5 Cycles
4.	Mating/Unmating Force (1) *Note: Record the fifth min. disengagement force*
5.	Cycles Quantity = 500 Cycles
6.	Air Blow Debris
7.	Interface Gaging *Note: Measure and record center contact recession below the body*
8.	Visual Inspection *Note: Visually inspect plating. Take a photo if LLCR failed*

Group 2
PRFMT-J-C-EE-047A-SD-1
AT-3007-069
5 Assemblies

Note:
A. SMPM smooth bore insertion
B. Engagement force <= 4.0 lbs

Step	Description
1.	Interface Gaging *Note: Measure and record center contact recession below the body*
2.	Mating/Unmating Force (1) *Note: Record the first Max. engagement force*
3.	Cycles Quantity = 5 Cycles
4.	Mating/Unmating Force (1) *Note: Record the fifth Max. engagement force*
5.	Cycles Quantity = 500 Cycles
6.	Air Blow Debris
7.	Interface Gaging *Note: Measure and record center contact recession below the body*
8.	Visual Inspection *Note: Visually inspect plating. Take a photo if LLCR failed*

Group 3
PRFMT-J-C-EE-047A-SD-1
AT-3007-070
5 Assemblies

Note:
A. SMPM full detent withdrawal
B. Disengagement force >= 3.0 lbs

Step	Description
1.	Interface Gaging *Note: Measure and record center contact recession below the body*
2.	Mating/Unmating Force (1) *Note: Record the first min. disengagement force*
3.	Cycles Quantity = 5 Cycles
4.	Mating/Unmating Force (1) *Note: Record the fifth min. disengagement force*
5.	Cycles Quantity = 100 Cycles
6.	Air Blow Debris
7.	Interface Gaging *Note: Measure and record center contact recession below the body*
8.	Visual Inspection *Note: Visually inspect plating. Take a photo if LLCR failed*

Group 4
PRFMT-J-C-EE-047A-SD-1
AT-3007-071
5 Assemblies

Note:
A. SMPM full detent insertion
B. Engagement force <= 8.0 lbs

Step	Description
1.	Interface Gaging *Note: Measure and record center contact recession below the body*
2.	Mating/Unmating Force (1) *Note: Record the first Max. engagement force*
3.	Cycles Quantity = 5 Cycles
4.	Mating/Unmating Force (1) *Note: Record the fifth Max. engagement force*
5.	Cycles Quantity = 100 Cycles
6.	Air Blow Debris
7.	Interface Gaging *Note: Measure and record center contact recession below the body*
8.	Visual Inspection *Note: Visually inspect plating. Take a photo if LLCR failed*

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

FLOWCHARTS Continued

IR/DWV

Note: Tighten nut before test

Pin-to-Ground

Group 1	Group 2
RF047-A-MTSJ-505050-0305	RF086-MTSJ-505050-0305
SMPMT-PF-P-EG-ST-MT-1	SMPMT-PF-P-EG-ST-MT-1
5 Assemblies	5 Assemblies

Step	Description	Step	Description
1.	IR (2) - Non Standard	1.	IR (2) - Non Standard
2.	DWV at Test Voltage(1) - Non Standard Test Voltage = 500 V	2.	DWV at Test Voltage(1) - Non Standard Test Voltage = 500 V
3.	LLCR (3)	3.	LLCR (3)
4.	Thermal Shock (4) - Non Standard	4.	Thermal Shock (4) - Non Standard
5.	IR (2) - Non Standard	5.	IR (2) - Non Standard
6.	DWV at Test Voltage(1) - Non Standard Test Voltage = 500 V	6.	DWV at Test Voltage(1) - Non Standard Test Voltage = 500 V
7.	LLCR (3) Max Delta = 15 mOhm	7.	LLCR (3) Max Delta = 15 mOhm

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(1) DWV at Test Voltage = Other
325 V rms min. at sea level
per DSCC 10020

(2) IR = Other
MIL-PRF-39012
5,000 megohms minimum per DSCC 10020

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

(4) Thermal Shock = Other
MIL-STD-202-107, Test condition B
-65 to 125°C (except high temperature to be +165°C or maximum high) per DSCC 10020

FLOWCHARTS Continued

Mechanical Shock/Random Vibration/Event Detection

Group 1
RF047-A-MTSJ-505050-0305
SMPMT-PF-P-EG-ST-MT-1
5 Assemblies
Tighten Nut Before Test

Step	Description
1.	LLCR (1)
2.	Nanosecond Event Detection (Mechanical Shock) (2) - Non Standard
3.	High Frequency Vibration *Note: MIL-STD-202, method 204, Condition D*
4.	LLCR (1) Max Delta = 15 mOhm

Group 2
RF086-MTSJ-505050-0305
SMPMT-PF-P-EG-ST-MT-1
5 Assemblies
Tighten Nut Before Test

Step	Description
1.	LLCR (1)
2.	Nanosecond Event Detection (Mechanical Shock) (2) - Non Standard
3.	High Frequency Vibration *Note: MIL-STD-202, method 204, Condition D*
4.	LLCR (1) Max Delta = 15 mOhm

Group 3
RF047-A-MTSJ-505050-0305
SMPMT-PS-P-EG-ST-MT-1
5 Assemblies
Tighten Nut Before Test

Step	Description
1.	LLCR (1)
2.	Nanosecond Event Detection (Mechanical Shock) (2) - Non Standard
3.	High Frequency Vibration *Note: MIL-STD-202, method 204, Condition D*
4.	LLCR (1) Max Delta = 15 mOhm

Group 4
RF086-MTSJ-505050-0305
SMPMT-PS-P-EG-ST-MT-1
5 Assemblies
Tighten Nut Before Test

Step	Description
1.	LLCR (1)
2.	Nanosecond Event Detection (Mechanical Shock) (2) - Non Standard
3.	High Frequency Vibration *Note: MIL-STD-202, method 204, Condition D*
4.	LLCR (1) Max Delta = 15 mOhm

Group 5
RF086-MTSJ-505050-0305
SMPMT-PF-P-EG-ST-MT-1
5 Assemblies
Remove Nut Before Test

Step	Description
1.	LLCR (1)
2.	Nanosecond Event Detection (Mechanical Shock) (2) - Non Standard
3.	High Frequency Vibration *Note: MIL-STD-202, method 204, Condition D*
4.	LLCR (1) Max Delta = 15 mOhm

Group 6
RF086-MTSJ-505050-0305
SMPMT-PS-P-EG-ST-MT-1
5 Assemblies
Remove Nut Before Test

Step	Description
1.	LLCR (1)
2.	Nanosecond Event Detection (Mechanical Shock) (2) - Non Standard
3.	High Frequency Vibration *Note: MIL-STD-202, method 204, Condition D*
4.	LLCR (1) 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
MIL-STD-202, method 213, condition I

FLOWCHARTS Continued

Cable Pull

Group 1
RF047-A-MTSJ-505050-0305

5 Assemblies
Pull To Destruct

Step	Description
1.	Cable Pull (1) - Non Standard *Note: Record the force*

Group 2
RF086-MTSJ-505050-0305

5 Assemblies
Pull To Destruct

Step	Description
1.	Cable Pull (1) - Non Standard *Note: Record the force*

Group 3
RF047-A-MTSJ-505050-0305

5 Assemblies

Step	Description
1.	Interface Gaging *Note: Measure and record center contact recession below the body*
2.	LLCR (3) *Note: Signal to ground*
3.	Cable Retention (2) - Non Standard *Note: Apply 5 pounds for cable retention test.*
4.	LLCR (3) Max Delta = 15 mOhm *Note: Signal to ground*
5.	Interface Gaging *Note: Measure and record center contact recession below the body*

Group 4
RF086-MTSJ-505050-0305

5 Assemblies

Step	Description
1.	Interface Gaging *Note: Measure and record center contact recession below the body*
2.	LLCR (3) *Note: Signal to ground*
3.	Cable Retention (2) - Non Standard *Note: Apply 15 pounds for cable retention test.*
4.	LLCR (3) Max Delta = 15 mOhm *Note: Signal to ground*
5.	Interface Gaging *Note: Measure and record center contact recession below the body*

(1) Cable Pull = Other
Pull to destruct. Record destruction force.

(2) Cable Retention = Other

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

ATTRIBUTE DEFINITIONS

The following is a brief, simplified description of attributes.

THERMAL SHOCK:

1) MIL-STD-202-107, Test Condition B, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors.*
2) Test Condition 1: -65°C to +165°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.

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

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.

NANOSECOND-EVENT DETECTION (Mechanical Shock):

1) Reference document: MIL-STD-202-213, *Nanosecond-Event Detection for Electrical Connectors*
2) Test condition I.
3) Prior to test, the samples were characterized to assure the low nanosecond event being monitored will trigger the detector.
4) After characterization it was determined the test samples could be monitored for 50 nanosecond events

NANOSECOND-EVENT DETECTION (Random Vibration):

1) Reference document: MIL-STD-202-204, *Nanosecond-Event Detection for Electrical Connectors*
2) Test condition D per DSCC 10019(15 minutes min).
3) Prior to test, the samples were characterized to assure the low nanosecond event being monitored will trigger the detector.
4) After characterization it was determined the test samples could be monitored for 50 nanosecond events

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.

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: At sea level per DSCC 10020.
    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

RF047-A-MTSJ-505050-0305

- **Min ---------- 9.62 lbs**
- **Max ---------- 15.41 lbs**

RF086-MTSJ-505050-0305

- **Min ---------- 28.15 lbs**
- **Max ---------- 30.57 lbs**

Insulation Resistance minimums, IR

RF047-A-MTSJ-505050-0305

Pin to Ground

- **Initial**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**

RF086-MTSJ-505050-0305

Pin to Ground

- **Initial**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**
- **Thermal Shock**
  - **Mated ---------- 45000 Meg Ω ---------- Passed**

Dielectric Withstanding Voltage minimums, DWV

RF047-A-MTSJ-505050-0305

- **Minimums**
  - **Test Voltage ---------- 500 VAC**

Pin to Ground

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

RF086-MTSJ-505050-0305

- **Minimums**
  - **Test Voltage ---------- 500 VAC**

Pin to Ground

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

RESULTS Continued

Mating/Unmating Durability Group

AT-3007-068 Group

- **Initial**
  - **Mating**
    - **Min ---------- 1.18 lbs**
    - **Max---------- 1.62 lbs**
  - **Unmating**
    - **Min ---------- 0.48 lbs**
    - **Max---------- 0.56 lbs**
- **After 5 Cycles**
  - **Mating**
    - **Min ---------- 1.09 lbs**
    - **Max---------- 1.49 lbs**
  - **Unmating**
    - **Min ---------- 0.48 lbs**
    - **Max---------- 0.55 lbs**
- **After 505 Cycles**
  - **Mating**
    - **Min ---------- 1.00 lbs**
    - **Max---------- 1.42 lbs**
  - **Unmating**
    - **Min ---------- 0.61 lbs**
    - **Max---------- 0.76 lbs**

AT-3007-069 Group

- **Initial**
  - **Mating**
    - **Min ---------- 1.42 lbs**
    - **Max---------- 1.92 lbs**
  - **Unmating**
    - **Min ---------- 0.67 lbs**
    - **Max---------- 1.01 lbs**
- **After 5 Cycles**
  - **Mating**
    - **Min ---------- 1.34 lbs**
    - **Max---------- 1.78 lbs**
  - **Unmating**
    - **Min ---------- 0.64 lbs**
    - **Max---------- 1.02 lbs**
- **After 505 Cycles**
  - **Mating**
    - **Min ---------- 1.41 lbs**
    - **Max---------- 1.88 lbs**
  - **Unmating**
    - **Min ---------- 0.80 lbs**
    - **Max---------- 1.01 lbs**

RESULTS Continued

Mating/Unmating Durability Group

AT-3007-070 Group

- **Initial**
  - **Mating**
    - **Min ---------- 1.84 lbs**
    - **Max---------- 2.35 lbs**
  - **Unmating**
    - **Min ---------- 0.96 lbs**
    - **Max---------- 1.97 lbs**
- **After 5 Cycles**
  - **Mating**
    - **Min ---------- 1.94 lbs**
    - **Max---------- 2.38 lbs**
  - **Unmating**
    - **Min ---------- 0.98 lbs**
    - **Max---------- 1.99 lbs**
- **After 105 Cycles**
  - **Mating**
    - **Min ---------- 1.71 lbs**
    - **Max---------- 1.89 lbs**
  - **Unmating**
    - **Min ---------- 1.28 lbs**
    - **Max---------- 1.89 lbs**

AT-3007-071 Group

- **Initial**
  - **Mating**
    - **Min ---------- 2.61 lbs**
    - **Max---------- 3.06 lbs**
  - **Unmating**
    - **Min ---------- 6.02 lbs**
    - **Max---------- 7.83 lbs**
- **After 5 Cycles**
  - **Mating**
    - **Min ---------- 2.43 lbs**
    - **Max---------- 2.92 lbs**
  - **Unmating**
    - **Min ---------- 5.31 lbs**
    - **Max---------- 7.50 lbs**
- **After 105 Cycles**
  - **Mating**
    - **Min ---------- 2.75 lbs**
    - **Max---------- 3.84 lbs**
  - **Unmating**
    - **Min ---------- 4.18 lbs**
    - **Max---------- 7.75 lbs**

RESULTS Continued

Interface Gaging

Cable Pull Group

Initial

- **Min ---------- 0.010 inch**
- **Max ---------- 0.015 inch**

After Retention

- **Min ---------- 0.010 inch**
- **Max ---------- 0.020 inch**

Mating/Unmating Durability Group

AT-3007-068

Initial

- **Min ---------- 0.010 inch**
- **Max ---------- 0.015 inch**

After Retention

- **Min ---------- 0.005 inch**
- **Max ---------- 0.010 inch**

AT-3007-069

Initial

- **Min ---------- 0.010 inch**
- **Max ---------- 0.015 inch**

After Retention

- **Min ---------- 0.010 inch**
- **Max ---------- 0.010 inch**

AT-3007-070

Initial

- **Min ---------- 0.005 inch**
- **Max ---------- 0.015 inch**

After Retention

- **Min ---------- 0.005 inch**
- **Max ---------- 0.015 inch**

AT-3007-071

Initial

- **Min ---------- 0.005 inch**
- **Max ---------- 0.010 inch**

After Retention

- **Min ---------- 0.005 inch**
- **Max ---------- 0.010 inch**

RESULTS Continued

LLCR IR/DWV (5 ground and 5 signal LLCR test points)

RF047-A-MTSJ-505050-0305

Ground pin

- **Initial ---------- 28.58 mOhms Max**
- **Thermal Shock**
  - **<= +5.0 mOhms ---------- 3 Points ---------- Stable**
  - **+5.1 to +10.0 mOhms ---------- 2 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 ---------- 97.50 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**

RF086-MTSJ-505050-0305

Ground pin

- **Initial ---------- 8.52 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**

Signal pin

- **Initial ---------- 31.25 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**

RESULTS Continued

LLCR Cable Pull (5 ground and 5 signal LLCR test points)

RF047-A-MTSJ-505050-0305

Ground pin

- **Initial ---------- 38.90 mOhms Max**
- **After 5lb Retention**
  - **<= +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**

Signal pin

- **Initial ---------- 87.77 mOhms Max**
- **After 5lb Retention**
  - **<= +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**

RF086-MTSJ-505050-0305

Ground pin

- **Initial ---------- 8.22 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**

Signal pin

- **Initial ---------- 24.78 mOhms Max**
- **After 15lb Retention**
  - **<= +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**

RESULTS Continued

LLCR Mechanical Shock & Random Vibration (5 ground and 5 signal LLCR test points)

G1:RF047-A-MTSJ-505050-0305/SMPMT-PF-P-EG-ST-MT-1

Ground pin

- **Initial ---------- 41.94 mOhms Max**
- **After 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**

Signal pin

- **Initial ---------- 91.17 mOhms Max**
- **After 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**

G2:RF086-MTSJ-505050-0305/SMPMT-PF-P-EG-ST-MT-1

Ground pin

- **Initial ----------8.52 mOhms Max**
- **After 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**

Signal pin

- **Initial ---------- 28.04 mOhms Max**
- **After 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**

RESULTS Continued

LLCR Mechanical Shock & Random Vibration (5 ground and 5 signal LLCR test points)

G3:RF047-A-MTSJ-505050-0305/SMPMT-PS-P-EG-ST-MT-1

Ground pin

- **Initial ---------- 43.72 mOhms Max**
- **After 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**

Signal pin

- **Initial ---------- 91.41 mOhms Max**
- **After 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**

G4:RF086-MTSJ-505050-0305/SMPMT-PS-P-EG-ST-MT-1

Ground pin

- **Initial ----------8.75 mOhms Max**
- **After 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**

Signal pin

- **Initial ---------- 27.97 mOhms Max**
- **After 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**

RESULTS Continued

LLCR Mechanical Shock & Random Vibration (5 ground and 5 signal LLCR test points)

G5: RF086-MTSJ-505050-0305/SMPMT-PF-P-EG-ST-MT-1

Ground pin

- **Initial ---------- 8.64 mOhms Max**
- **After 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**

Signal pin

- **Initial ---------- 27.81 mOhms Max**
- **After 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**

G6:RF086-MTSJ-505050-0305/SMPMT-PS-P-EG-ST-MT-1

Ground pin

- **Initial ---------- 8.54 mOhms Max**
- **After 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**

Signal pin

- **Initial ---------- 27.76 mOhms Max**
- **After 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**

RESULTS Continued

Mechanical Shock & Random Vibration:

G1:RF047-A-MTSJ-505050-0305/SMPMT-PF-P-EG-ST-MT-1

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

G2:RF086-MTSJ-505050-0305/SMPMT-PF-P-EG-ST-MT-1

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

G3:RF047-A-MTSJ-505050-0305/SMPMT-PS-P-EG-ST-MT-1

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

G4:RF086-MTSJ-505050-0305/SMPMT-PS-P-EG-ST-MT-1

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

G5: RF086-MTSJ-505050-0305/SMPMT-PF-P-EG-ST-MT-1

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

G6:RF086-MTSJ-505050-0305/SMPMT-PS-P-EG-ST-MT-1

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

DATA SUMMARIES

INSULATION RESISTANCE (IR):

	Pin to Ground
	Mated
Minimum	**RF047-SMPMT**
Initial	45000
Thermal Shock	45000

	Pin to Ground
	Mated
Minimum	**RF086-SMPMT**
Initial	45000
Thermal Shock	45000

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

IR/DWV Group

Voltage Rating Summary	
Minimum	**RF047-SMPMT**
Test Voltage	500

Pin to Ground	
Initial Test Voltage	Pass
After Thermal Shock Test Voltage	Pass

Voltage Rating Summary	
Minimum	**RF086-SMPMT**
Test Voltage	500

Pin to Ground	
Initial Test Voltage	Pass
After Thermal Shock Test Voltage	Pass

Cable Pull Force:

RF047-A-MTSJ-505050-0305

	Force (lbs)
Minimum	**11.18**
Maximum	15.81
Average	13.04

RF086-MTSJ-505050-0305

	Force (lbs)
Minimum	**28.15**
Maximum	30.57
Average	29.34

DATA SUMMARIES Continued

LLCR IR/DWV:

RF047-A-MTSJ-505050-0305

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. <= +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	1/13/2025	1/14/2025		
Room Temp (Deg C)	22	22		
Rel Humidity (%)	50	50		
Technician	Keney Chen	Keney Chen		
mOhm values	Actual **Initial**	**Delta Thermal Shock**		
	Pin Type: Signal 1			
Average	94.622	1.636		
St. Dev.	1.9522	0.4367		
Min	92.19	0.89		
Max	97.5	1.97		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	27.896	5.064		
St. Dev.	0.4731	0.6226		
Min	27.46	4.34		
Max	28.58	5.9		
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 Thermal Shock	**8**	**2**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

LLCR IR/DWV:

RF086-MTSJ-505050-0305

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. <= +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	12/11/2024	12/12/2024		
Room Temp (Deg C)	22	22		
Rel Humidity (%)	50	50		
Technician	Keney Chen	Keney Chen		
mOhm values	Actual **Initial**	**Delta** **Thermal Shock**		
	Pin Type: Signal 1			
Average	30.45	0.64		
St. Dev.	0.9669	0.5299		
Min	29.02	0		
Max	31.25	1.39		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	8.462	0.528		
St. Dev.	0.0719	0.1203		
Min	8.35	0.42		
Max	8.52	0.73		
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 Thermal Shock	**10**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

LLCR Cable Pull:

RF047-A-MTSJ-505050-0305

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. <= +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	12/11/2024	12/12/2024		
Room Temp (Deg C)	20	20		
Rel Humidity (%)	50	50		
Technician	Keney Chen	Keney Chen		
mOhm values	**Actual** **Initial**	**Delta** **after 5lb Retention**		
	Pin Type: Signal 1			
Average	86.96	1.01		
St. Dev.	0.47	0.44		
Min	86.64	0.58		
Max	87.77	1.63		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	36.91	1.04		
St. Dev.	2.02	0.51		
Min	34.5	0.27		
Max	38.9	1.63		
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 5lb Retention	**10**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

LLCR Cable Pull:

RF086-MTSJ-505050-0305

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. <= +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	12/11/2024	12/12/2024		
Room Temp (Deg C)	20	20		
Rel Humidity (%)	50	50		
Technician	Keney Chen	Keney Chen		
mOhm values	**Actual** **Initial**	**Delta** **after 15lb Retention**		
	Pin Type: Signal 1			
Average	24.32	0.17		
St. Dev.	0.38	0.18		
Min	23.97	0.03		
Max	24.78	0.47		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	8.07	0.23		
St. Dev.	0.11	0.13		
Min	7.96	0.11		
Max	8.22	0.4		
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 15lb Retention	**10**	**0**	**0**	**0**	**0**	**0**

DATA SUMMARIES Continued

LLCR Mechanical Shock & Random Vibration:

G1:RF047-A-MTSJ-505050-0305/SMPMT-PF-P-EG-ST-MT-1

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. <= +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	4/7/2025	8/5/2025		
Room Temp (Deg C)	22	25		
Rel Humidity (%)	30	56		
Technician	Daniel Haydon	Kason He		
mOhm values	Actual **Initial**	**Delta Shock-Vib**		
	Pin Type: Signal 1			
Average	90.85	0.09		
St. Dev.	0.29	0.05		
Min	90.38	0.01		
Max	91.17	0.13		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	38.45	2.22		
St. Dev.	2.92	1.90		
Min	35.67	0.08		
Max	41.94	4.05		
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**
Shock-Vib	**10**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

Shock and Vibration Event Detection Summary	
Contacts tested	5
Test Condition	Test Condition I (100G Peak, 11 milliseconds, Sawtooth) Per MIL-STD-202 Method 204
Shock Events	0
Test Condition	Test Condition D (20g Peak) Per MIL-STD-202 Method 204
Vibration Events	0
Total Events	0

DATA SUMMARIES Continued

LLCR Mechanical Shock & Random Vibration:

G2:RF086-MTSJ-505050-0305 / SMPMT-PF-P-EG-ST-MT-1

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. <= +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	4/7/2025	8/6/2025		
Room Temp (Deg C)	22	25		
Rel Humidity (%)	30	56		
Technician	Daniel Haydon	Kason He		
mOhm values	Actual **Initial**	**Delta Shock-Vib**		
	Pin Type: Signal 1			
Average	27.73	0.26		
St. Dev.	0.19	0.10		
Min	27.54	0.17		
Max	28.04	0.41		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	8.42	2.25		
St. Dev.	0.13	0.49		
Min	8.24	1.55		
Max	8.52	2.91		
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**
Shock-Vib	**10**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

Shock and Vibration Event Detection Summary	
Contacts tested	5
Test Condition	Test Condition I (100G Peak, 11 milliseconds, Sawtooth) Per MIL-STD-202 Method 204
Shock Events	0
Test Condition	Test Condition D (20g Peak) Per MIL-STD-202 Method 204
Vibration Events	0
Total Events	0

DATA SUMMARIES Continued

LLCR Mechanical Shock & Random Vibration:

G3: RF047-A-MTSJ-505050-0305 / SMPMT-PS-P-EG-ST-MT-1

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. <= +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	4/7/2025	8/6/2025		
Room Temp (Deg C)	22	25		
Rel Humidity (%)	30	56		
Technician	Daniel Haydon	Kason He		
mOhm values	Actual **Initial**	**Delta Shock-Vib**		
	Pin Type: Signal 1			
Average	90.73	0.52		
St. Dev.	0.66	0.37		
Min	89.72	0.21		
Max	91.41	1.15		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	38.75	2.16		
St. Dev.	4.02	1.51		
Min	33.33	0.12		
Max	43.72	3.81		
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**
Shock-Vib	**10**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

Shock and Vibration Event Detection Summary	
Contacts tested	5
Test Condition	Test Condition I (100G Peak, 11 milliseconds, Sawtooth) Per MIL-STD-202 Method 204
Shock Events	0
Test Condition	Test Condition D (20g Peak) Per MIL-STD-202 Method 204
Vibration Events	0
Total Events	0

DATA SUMMARIES Continued

LLCR Mechanical Shock & Random Vibration:

G4:RF086-MTSJ-505050-0305 / SMPMT-PS-P-EG-ST-MT-1

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. <= +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	4/7/2025	8/6/2025		
Room Temp (Deg C)	22	25		
Rel Humidity (%)	31	56		
Technician	Daniel Haydon	Kason He		
mOhm values	Actual **Initial**	**Delta Shock-Vib**		
	Pin Type: Signal 1			
Average	27.69	0.17		
St. Dev.	0.26	0.06		
Min	27.27	0.12		
Max	27.97	0.27		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	8.53	1.90		
St. Dev.	0.16	0.38		
Min	8.35	1.28		
Max	8.75	2.22		
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**
Shock-Vib	**10**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

Shock and Vibration Event Detection Summary	
Contacts tested	5
Test Condition	Test Condition I (100G Peak, 11 milliseconds, Sawtooth) Per MIL-STD-202 Method 204
Shock Events	0
Test Condition	Test Condition D (20g Peak) Per MIL-STD-202 Method 204
Vibration Events	0
Total Events	0

DATA SUMMARIES Continued

LLCR Mechanical Shock & Random Vibration:

G5:RF086-MTSJ-505050-0305 / SMPMT-PF-P-EG-ST-MT-1

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. <= +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	4/7/2025	8/6/2025		
Room Temp (Deg C)	22	25		
Rel Humidity (%)	31	56		
Technician	Daniel Haydon	Kason He		
mOhm values	Actual **Initial**	**Delta Shock-Vib**		
	Pin Type: Signal 1			
Average	27.6	0.13		
St. Dev.	0.19	0.10		
Min	27.34	0.01		
Max	27.81	0.25		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	8.41	1.74		
St. Dev.	0.13	0.65		
Min	8.34	0.86		
Max	8.64	2.27		
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**
Shock-Vib	**10**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

Shock and Vibration Event Detection Summary	
Contacts tested	5
Test Condition	Test Condition I (100G Peak, 11 milliseconds, Sawtooth) Per MIL-STD-202 Method 204
Shock Events	0
Test Condition	Test Condition D (20g Peak) Per MIL-STD-202 Method 204
Vibration Events	0
Total Events	0

DATA SUMMARIES Continued

LLCR Mechanical Shock & Random Vibration:

G6:RF086-MTSJ-505050-0305 / SMPMT-PS-P-EG-ST-MT-1

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. <= +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	4/7/2025	8/6/2025		
Room Temp (Deg C)	22	25		
Rel Humidity (%)	37	56		
Technician	Daniel Haydon	Kason He		
mOhm values	Actual **Initial**	**Delta Shock-Vib**		
	Pin Type: Signal 1			
Average	27.58	0.14		
St. Dev.	0.22	0.12		
Min	27.21	0.03		
Max	27.76	0.35		
Summary Count	5	5		
Total Count	5	5		
	Pin Type: GND 1			
Average	8.43	2.50		
St. Dev.	0.08	0.34		
Min	8.33	1.99		
Max	8.54	2.78		
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**
Shock-Vib	**10**	**0**	**0**	**0**	**0**	**0**

Nanosecond Event Detection:

Shock and Vibration Event Detection Summary	
Contacts tested	5
Test Condition	Test Condition I (100G Peak, 11 milliseconds, Sawtooth) Per MIL-STD-202 Method 204
Shock Events	0
Test Condition	Test Condition D (20g Peak) Per MIL-STD-202 Method 204
Vibration Events	0
Total Events	0

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: 3/4/2025, Next Cal: 3/3/2026

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: 04/16/2025, Next Cal: 04/15/2026

Equipment #: DG-HPT-01
Description: Hipot Safety Tester
Manufacturer: Vitrek
Model: V73
Serial #: 025866
Accuracy:
… Last Cal: 04/16/2025, Next Cal: 04/15/2026

Equipment #: HZ-MO-05
Description: Micro-ohmmeter
Manufacturer: Keithley
Model: 3706
Serial #: 1285188
Accuracy: Last Cal: 12/17/2024, Next Cal: 12/16/2025

Equipment #: ED-03
Description: Event Detector
Manufacturer: Analysis Tech
Model: 32EHD
Serial #: 1100604
Accuracy: See Manual
… Last Cal: 06/04/2025, Next Cal: 06/04/2026

Equipment #: SVC-01
Description: Shock & Vibration Table
Manufacturer: Data Physics
Model: LE-DSA-10-20K
Serial #: 10037
Accuracy: See Manual
… Last Cal: 11/31/2024, Next Cal: 11/31/2025

EQUIPMENT AND CALIBRATION SCHEDULES Continued

Equipment #: ACLM-01
Description: Accelerometer
Manufacturer: PCB Piezotronics
Model: 352C03
Serial #: 115819
Accuracy: See Manual
… Last Cal: 07/09/2025, Next Cal: 07/09/2026
Equipment #: ED-03
Description: Event Detector
Manufacturer: Analysis Tech
Model: 32EHD
Serial #: 1100604
Accuracy: See Manual
… Last Cal: 10/31/2024, Next Cal: 10/31/2025
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