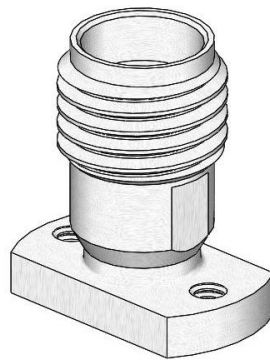
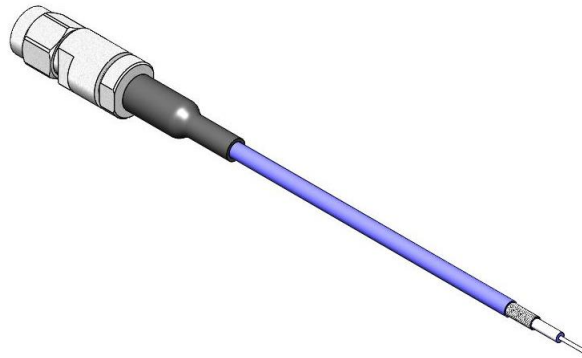




Project Number: Design Qualification Test Report	Tracking Code: 2893291_Report_Rev_1
Requested by: Jenny Chou	Date: 11/17/2021
Part #: 292-J-P-EP-ST-CMM-2 /RF086-92SP-505050-0304	
Part description: 292-J-P / RF086-92SP	Tech: Keney Chen
Test Start: 7/21/2021	Test Completed: 7/28/2021



DESIGN QUALIFICATION TEST REPORT
292-J-P / RF086-92SP
292-J-P-EP-ST-CMM-2 /RF086-92SP-505050-0304

REVISION HISTORY

DATA	REV.NUM.	DESCRIPTION	ENG
8/2/2021	1	Initial Issue	KC

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.

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

IR/DWV

Pin-to-Closest Metallic Hardware

Group 1

292-J-P-EP-ST-CMM-2
RF086-92SP-505050-0304
2 Assemblies

Step	Description
1.	DWV Breakdown ⁽²⁾

Group 2

292-J-P-EP-ST-CMM-2

2 Assemblies

Step	Description
1.	DWV Breakdown ⁽²⁾

Group 3

RF086-92SP-505050-0304
2 Assemblies

Step	Description
1.	DWV Breakdown ⁽²⁾

Group 4

292-J-P-EP-ST-CMM-2
RF086-92SP-505050-0304
2 Assemblies

Step	Description
1.	IR ⁽³⁾
2.	DWV at Test Voltage ⁽¹⁾
3.	Thermal Shock ⁽⁴⁾
4.	IR ⁽³⁾
5.	DWV at Test Voltage ⁽¹⁾

-
- (1) DWV at Test Voltage = EIA-364-20
Test Condition = 1 (Sea Level)
DWV test voltage is equal to 75% of the lowest breakdown voltage
Test voltage applied for 60 seconds
- (2) DWV Breakdown = EIA-364-20
Test Condition = 1 (Sea Level)
DWV test voltage is equal to 75% of the lowest breakdown voltage
Test voltage applied for 60 seconds
- (3) IR = EIA-364-21
Test Condition = 500 Vdc, 2 Minutes Max
- (4) Thermal Shock = EIA-364-32
Exposure Time at Temperature Extremes = 1/2 Hour
Method A, Test Condition = 1 (-55°C to +85°C)
Test Duration = A-3 (100 Cycles)

ATTRIBUTE DEFINITIONS

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: EIA-364-21.
 - 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: EIA-364-20.
 - 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).

THERMAL SHOCK:

- 1) EIA-364-32, *Thermal Shock (Temperature Cycling) Test Procedure for Electrical Connectors.*
- 2) Test Condition 1: -55°C to +85°C
- 3) Test Time: ½ 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 stressing in the mated condition.

RESULTS

Insulation Resistance minimums, IR

Pin to Ground

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

Dielectric Withstanding Voltage minimums, DWV

- **Minimums**
 - Breakdown Voltage----- 1100 VAC
 - Test Voltage -----825 VAC
 - Working Voltage -----275 VAC

Pin to Ground

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

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

		Pin to Ground
		Mated
Minimum		292-J-P/RF086-92SP
Initial		45000
Thermal Shock		45000

DIELECTRIC WITHSTANDING VOLTAGE (DWV):

Voltage Rating Summary	
Minimum	292-J-P/RF086
Break Down Voltage	1100
Test Voltage	825
Working Voltage	275

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

EQUIPMENT AND CALIBRATION SCHEDULES**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: 04/16/2021, Next Cal: 04/15/2022

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

... Last Cal: 04/16/2021, Next Cal: 04/15/2022

Equipment #: HZ-MO-05**Description:** Micro-ohmmeter**Manufacturer:** Keithley**Model:** 3706**Serial #:** 1285188**Accuracy:** Last Cal: 12/17/2020, Next Cal: 12/16/2021