



PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers an SMP Connector

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME SMP CONNECTOR

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

4.0 RATINGS

4.1 VOLTAGE

335 Vrms at Sea Level

65 Vrms at 70,000 Feet

4.2 TEMPERATURE

Rating: - 65°C TO + 155°C

4.3 FREQUENCY RATING

0 to 40 GHz

4.4 NOMINAL IMPEDANCE

50 Ohms

REVISION: A5	ECR/ECN INFORMATION: EC No: URF-2010-0017 DATE: 2009 / 07 / 08	TITLE: PS-89675-3320 SMP CONNECTOR	SHEET No. 1 of 4
DOCUMENT NUMBER: PS-89675-332	CREATED / REVISED BY: SSS/JDW	CHECKED BY: TEF	APPROVED BY: JDW



PRODUCT SPECIFICATION

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Insulation Resistance	MIL-PRF-39012, paragraph 3.11	5000 Megohms
2	Dielectric Withstanding Voltage	MIL-PRF-39012, paragraph 3.17	500 Vrms
3	RF High Potential Withstanding	MIL-PRF-39012, paragraph 3.23	400 Vrms @ 4 and 7 MHz
4	Contact Resistance	MIL-PRF-39012, paragraph 3.16 Center Contact Initial Center Contact After Environment Outer Contact Outer Cable Conductor to Body	=<6 Milliohms N/A =<2 Milliohms N/A
5	Voltage Standing Wave Ratio	MIL-PRF-39012, paragraph 3.14	1.50 Max.
6	Contact Current		1.2 A DC Max.
7	RF Insertion Loss	MIL-PRF-39012, paragraph 3.27	=<.1 dB Max @ 1 GHz

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
8	Material	MIL-PRF-39012, paragraph 3.3	See Sales Drawing
9	Finish	MIL-PRF-39012, paragraph 3.3.1	See Sales Drawing
10	Design	MIL-PRF-39012, paragraph 3.4	See Sales Drawing
11	Recommended Mating Torque		N/A
12	Force to Engage	Axial Force (Full, Ltd, Smooth)	15.00 lbs (66.75N), 10.00 lbs (44.5N), 2.00 lbs (8.9N) Max
13	Force to Disengage	Axial Force (Full, Ltd, Smooth)	5.00 lbs (22.25N), 2.00 lbs (8.9N), 0.5 lbs (2.225N)
14	Coupling Proof Torque	MIL-PRF-39012, paragraph 3.6	N/A

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5.2 MECHANICAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
15	Mating Characteristics	MIL-PRF-39012, paragraph 3.7	N/A
16	Connector Durability	MIL-PRF-39012, paragraph 3.15 (Full, Ltd, Smooth)	100, 500, 1000 Cycles
17	Center Contact Retention	MIL-PRF-39012, paragraph 3.12 Axial Force Radial Torque	1.50 lbs (6.68N) N/A
18	Cable Retention	MIL-PRF-39012, paragraph 3.24 Axial Force	N/A

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
19	Vibration	MIL-PRF-39012, paragraph 3.18 Per MIL-STD-202, Method 204	Test Condition B
20	Shock	MIL-PRF-39012, paragraph 3.19 Per MIL-STD-202, Method 213	Test Condition B
21	Shock (Thermal)	MIL-PRF-39012, paragraph 3.2 Per MIL-STD-202, Method 107	Test Condition B
22	Corrosion (Salt Spray)	MIL-PRF-39012, paragraph 3.13 Per MIL-STD-202, Method 101	Test Condition B
23	Moisture Resistance	MIL-PRF-39012, paragraph 3.21 Per MIL-STD-202, Method 106	DWV 500 Vrms (after drying)
24	Corona Level	MIL-PRF-39012, paragraph 3.22 At 70,000 Feet	125 Vrms
25	Temperature Life	EIA-364-17, Method A, Condition 4 (105 Deg C for 1000 hours)	No physical damage. Maximum LLCR change 10 milliohm (noble metals) or 20 milliohms (non-noble metals)
26	Cyclic Temperature and Humidity	EIA-364-31, method III, Condition B	No physical damage. Maximum LLCR change 10 milliohm (noble metals) or 20 milliohms (non-noble metals)
27	Mixed Flowing Gas	EIA-364-65, Condition IIA, 14 days (7 + 7)	No physical damage. Maximum LLCR change 10 milliohm (noble metals) or 20 milliohms (non-noble metals)

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6.0 MISALIGNMENT

6.1 RADIAL MISALIGNMENT

FORMULA: $A = B \times \sin(\beta)$

A = Max radial misalignment

B = Height of the bullet $\leq 13\text{mm}$ (.512")

β = Max angle 4°

For bullet height $> 13\text{mm}$, max radial misalignment: 0.92mm (.036")

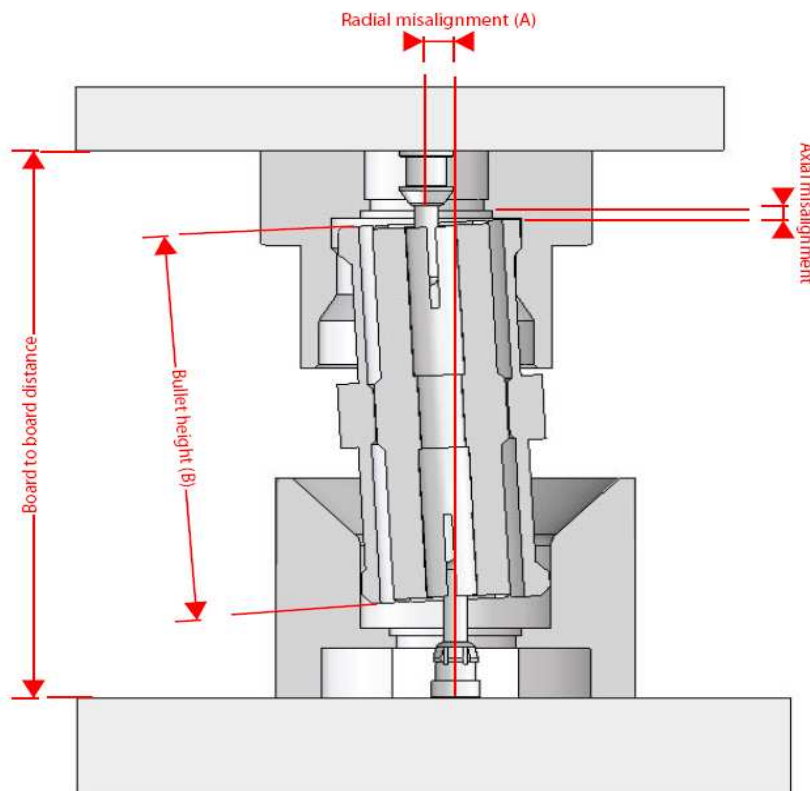
6.2 AXIAL MISALIGNMENT

WITHOUT RADIAL MISALIGNMENT:

MAXIMUM AXIAL MISALIGNMENT = 0.7mm (.027")

WITH SIMULTANEOUS RADIAL MISALIGNMENT:

MAXIMUM AXIAL MISALIGNMENT = 0.6mm (.024")



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