



PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers SMPM Connectors.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME

SMPM

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

MIL-STD-348A

4.0 RATINGS

4.1 VOLTAGE

275 Vrms at Sea Level

85 Vrms at 70,000 Feet

4.2 TEMPERATURE

Rating: - 65°C TO + 165°C

4.3 FREQUENCY RATING

DC to 65 GHz

4.4 NOMINAL IMPEDANCE

50 Ohms

REVISION: B	ECR/ECN INFORMATION: EC No: URF2010-0166 DATE: 2013/09/19	TITLE: PS-89675-3730 SMPM	SHEET No. 1 of 4
DOCUMENT NUMBER: PS-89675-373	CREATED / REVISED BY: J. WIENER	CHECKED BY: S. SHAH	APPROVED BY: J. WIENER



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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	Contact Resistance	MIL-PRF-39012, paragraph 3.16 Center Contact Outer Contact	6.0 Milliohms Max 2 Milliohms Max
4	Voltage Standing Wave Ratio	MIL-PRF-39012, paragraph 3.14	1.10 DC to 23 GHz 1.15 23 GHz to 26 GHz 1.35 26 GHz to 50 GHz
5	RF Leakage	MIL-PRF-39012, paragraph 3.26	-65 dB @ 26.5 GHz
6	RF Insertion Loss	MIL-PRF-39012, paragraph 3.27	.10 db x \sqrt{f} (GHz) Max

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
7	Material	MIL-PRF-39012, paragraph 3.3	See Sales Drawing
8	Finish	MIL-PRF-39012, paragraph 3.3.1	See Sales Drawing
9	Design	MIL-PRF-39012, paragraph 3.4	See Sales Drawing
10	Recommended Mating Torque		N/A
11	Force to Engage and Disengage	MIL-PRF-39012, paragraph 3.5.1 Axial Force	Full Detent Engage 4.5 lbs Typ Disengage 6.5 lbs Typ Smooth Bore Engage 2.5 lbs Typ Disengage 1.5 lbs Typ
12	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
13	Mating Characteristics	MIL-PRF-39012, paragraph 3.7	N/A
14	Connector Durability	MIL-PRF-39012, paragraph 3.15	Full Detent 100 Cycles Smooth Bore 500 Cycles
15	Center Contact Retention	MIL-PRF-39012, paragraph 3.12 Axial Force Radial Torque	1.5 lbs (captivated designs) N/A
16	Cable Retention	MIL-PRF-39012, paragraph 3.24 Axial Force	Per Cable Specification
17	Hermetic Seal	MIL-PRF-39012, paragraph 3.9 Helium Tracer Gas	N/A

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
18	Vibration	MIL-PRF-39012, paragraph 3.18 Per MIL-STD-202, Method 204	Test Condition B
19	Shock	MIL-PRF-39012, paragraph 3.19 Per MIL-STD-202, Method 213	Test Condition B
20	Shock (Thermal)	MIL-PRF-39012, paragraph 3.2 Per MIL-STD-202, Method 107	Test Condition B
21	Corrosion (Salt Spray)	MIL-PRF-39012, paragraph 3.13 Per MIL-STD-202, Method 101	Test Condition B
22	Moisture Resistance	MIL-PRF-39012, paragraph 3.21 Per MIL-STD-202, Method 106	DWV 500 Vrms (after drying)

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6.0 MISALIGNMENT

6.1 RADIAL MISALIGNMENT

Formula: $A = B \times \sin(z)$

A = Max radial misalignment

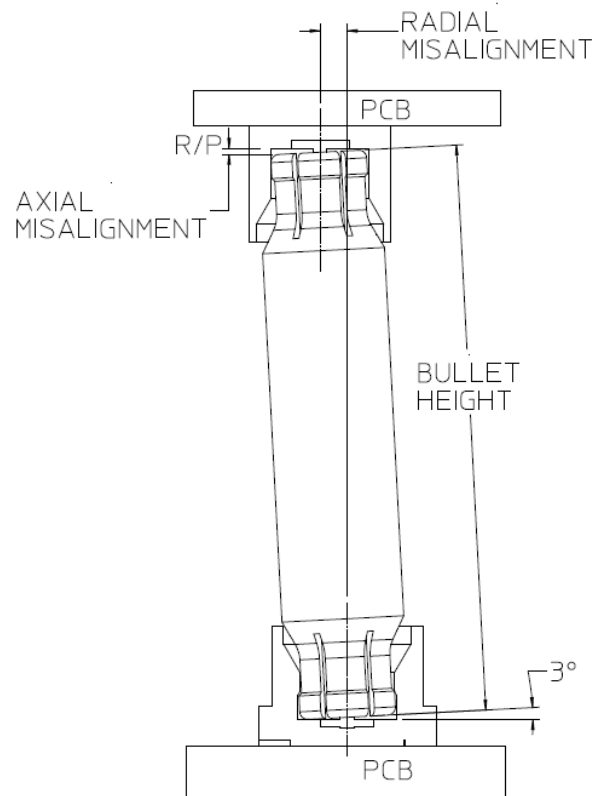
B = Height of the bullet $\leq 6.3\text{mm}$ (.248")

z = Max angle 3°

For bullet height $\geq 6.3\text{mm}$ (.248") max radial misalignment = 0.33mm (.013")

6.2 AXIAL MISALIGNMENT

Max misalignment 0.46mm (.018")



.500" length bullet shown

Diagram: SK3094

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