



# PRODUCT SPECIFICATION

## 1.0 SCOPE

This Product Specification covers SMA Connectors (Standard, Field Replaceable, and Precision)

## 2.0 PRODUCT DESCRIPTION

### 2.1 PRODUCT NAME

SMA

## 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

MIL-STD-348A

## 4.0 RATINGS

### 4.1 VOLTAGE

500 Vrms at Sea Level

### 4.2 TEMPERATURE

Rating: - 65°C TO + 165°C

### 4.3 FREQUENCY RATING

DC to 18 GHz (Standard)

DC to 27 GHz (Precision/Field Replaceable)

### 4.4 NOMINAL IMPEDANCE

50 Ohms

REVISION: <b>A7</b>	ECR/ECN INFORMATION: EC No: <b>URF2013-0054</b> DATE: <b>2012 /07/ 30</b>	TITLE: <b>PS-89675-3460 SMA</b>	SHEET No. <b>1 of 3</b>
DOCUMENT NUMBER: <b>PS-89675-346</b>	CREATED / REVISED BY: <b>S. SHAH/J. WIENER</b>	CHECKED BY: <b>T. FLAHERTY</b>	APPROVED BY: <b>G.HUBBARD</b>



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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	$\geq 5000$ Megohms
2	Dielectric Withstanding Voltage	MIL-PRF-39012, paragraph 3.17	1000 Vrms
3	Contact Resistance	MIL-PRF-39012, paragraph 3.16 Center Contact Outer Contact	$\leq 3$ Milliohms $\leq 2$ Milliohms
4	Voltage Standing Wave Ratio	MIL-PRF-39012, paragraph 3.14 Standard Precision/Field Replaceable	$1.06 + 0.001 \times f$ (GHz) $1.04 + .001f$ (GHz)
5	RF Leakage	MIL-PRF-39012, paragraph 3.26	-100dB
6	RF Insertion Loss	MIL-PRF-39012, paragraph 3.27 Standard Precision/Field Replaceable	$0.04 \times \sqrt{f}$ (GHz) dB $0.03 \times \sqrt{f}$ (GHz) Db
7	RF High Potential Withstanding	MIL-PRF-39012, paragraph 3.23	750V @ 5-7.5 MHz

### 5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
8	Material/Finish	MIL-PRF-39012, paragraph 3.3	See Sales Drawing
9	Design	MIL-PRF-39012, paragraph 3.4	See Sales Drawing
10	Panel Nut Torque	N/A	5.30 in-lb (if applicable)
11	Recommended Mating Torque	MIL-PRF-39012	7-10 inch-pounds (steel part) 4-5 inch-pounds (brass part)
12	Force to Engage and Disengage	MIL-PRF-39012, paragraph 3.5.1 Axial Force Radial Force	N/A 2 in-lb
13	Coupling Proof Torque	MIL-PRF-39012, paragraph 3.6	15 inch-pounds
14	Coupling Nut Retention Force	MIL-PRF-39012, paragraph 3.25	60 pounds

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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	500 Cycles
17	Center Contact Retention	MIL-PRF-39012, paragraph 3.12 Axial Force Radial Torque	6.0 lbs N/A
18	Cable Retention	MIL-PRF-39012, paragraph 3.24 Axial Force	Per Cable Specification
19	Hermetic Seal	MIL-PRF-39012, paragraph 3.9 Helium Tracer Gas	Per sales drawing

## 5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
20	Vibration	MIL-PRF-39012, paragraph 3.18 Per MIL-STD-202, Method 204	Test Condition D
21	Shock	MIL-PRF-39012, paragraph 3.19 Per MIL-STD-202, Method 213	Test Condition I
22	Shock (Thermal)	MIL-PRF-39012, paragraph 3.2 Per MIL-STD-202, Method 107	Test Condition B (165 °C)
23	Corrosion (Salt Spray)	MIL-PRF-39012, paragraph 3.13 Per MIL-STD-202, Method 101	Test Condition B
24	Moisture Resistance	MIL-PRF-39012, paragraph 3.21 Per MIL-STD-202, Method 106	DWV 1000 Vrms (after drying)

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