

# 7mm DESIGN FEATURES & SPECIFICATIONS

**7mm DESIGN FEATURES:** SGMC Microwaves 7mm series are precision grade connectors designed for use with microwave applications requiring excellent performance up to 18 GHz. SGMC offers an extensive line of 7mm precision adapters, receptacles, and cable connectors for various semi-rigid and flexible coaxial cables. Special designs are also available upon request.

- Frequency Range: DC to 18 GHz
- Mates with Precision 7mm Connectors (Sexless // Genderless)
- Robust Coupling Mechanism
- Low VSWR and insertion loss



## 7mm SPECIFICATIONS (General)

### ELECTRICAL

<b>Frequency Range:</b>	<b>DC to 18 GHz</b>
<b>Nominal Impedance:</b>	50 Ohms
<b>Temperature Range:</b>	-65°C to +165°C (TEFLON) -55°C to +125°C (PPO) -240°C to +204°C (KEL-F)
<b>VSWR:</b> (Individual results may vary)	1.25:1 Max
<b>Insertion Loss:</b>	0.45 dB Max
<b>Dielectric Withstanding Voltage:</b>	2,500 Volts RMS

### ENVIRONMENTAL

<b>Corrosion (salt spray):</b>	MIL-STD-202, Method 101, Test Condition B (5% Salt Solution)
<b>Vibration:</b>	MIL-STD-202, Method 204, Test Condition D (20 Gs)
<b>Shock:</b>	MIL-STD-202, Method 213, Test Condition I (100 Gs)
<b>Temperature Cycling:</b>	MIL-STD-202, Method 102, Test Condition C
<b>Moisture Resistance:</b>	MIL-STD-202, Method 106

(Consult factory for individual product specifications)

### MECHANICAL

<b>Mating:</b>	(11/16") .6875-24 UNEF threaded ring coupling
<b>Recommended Mating Torque:</b>	10-12 inch-pounds (Hand tighten preferred)
<b>Connector Durability:</b>	1,000 cycles minimum

### MATERIAL

<b>Body Components:</b>	Corrosion resistant Type 303 (Stainless Steel) Non-Magnetic, per ASTM-A-484 and ASTM-A-582
<b>Center Contacts &amp; Outer Contact Interface:</b>	Beryllium Copper per ASTM-B-196, alloy C17300, ASTM Temper (condition) TD04
<b>Dielectric:</b>	Fluorocarbon (PTFE) per ASTM-D-1710, Type 1, Grade 1, Class A  Oxide-Noryl (Polyphenylene) per MIL-P-46129
<b>Gaskets &amp; "O" Rings:</b>	Silicone Rubber per ZZ-R-765 & MIL-R-5847 Class 2 A&B, Grades 50~70. (A-A-59588)

### FINISH

<b>Body Components:</b>	Passivated per ASTM-A-967 & AMS-QQ-P-35
<b>Center Contacts:</b>	Gold Plate to a minimum thickness of 50 micro inches per ASTM-B-488, Type 2, Code C, Class 1, over 50 micro inches minimum of Nickel per AMS-QQ-N-290, Class 1

DWG NO.

7mm Series

**SGMC MICROWAVE**  
www.sgmcmicrowave.com

REVISIONS

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Manufacturer of Precision Coaxial Connectors	
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SHEET: 1 OF 1	SIZE: A