

2.4mm DESIGN FEATURES & SPECIFICATIONS

2.4mm DESIGN FEATURES: SGMC Microwaves 2.4mm series are precision grade connectors designed for use with microwave applications requiring excellent performance up to 50 GHz. Optimum results are achieved with the use of a 2.4mm outer conductor diameter and air dielectric. The 2.4mm series is mechanically compatible with 1.85mm connector series. The 2.4mm interface is designed to insure the outer conductors of mating connectors engage and align before the center contacts engage preventing damage to the female center contact tines. SGMC offers an extensive line of 2.4mm 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 50 GHz
- Mechanically compatible with 1.85mm connector series
- Ruggedized construction for repeatability and reliability
- Phase matched adapters
- Captivated Center Contact
- Low VSWR and insertion loss



2.4mm SPECIFICATIONS (General)

ELECTRICAL

Frequency Range:	DC to 50 GHz
Nominal Impedance:	50 Ohms
Temperature Range:	-240°C to +204°C (KEL-F) -55°C to +125°C (PPO)
VSWR: (Individual results may vary)	1.30:1 Max
Insertion Loss:	0.50 dB Max

MECHANICAL

Mating:	M7 X 0.75 threaded coupling
Recommended Mating Torque:	8-10 inch-pounds
Coupling Proof Torque:	15 inch-pounds minimum
Coupling Nut Retention:	Axial force is 60 in-lb minimum (Male Only)
Contact Retention:	Axial force is 4 pounds minimum
Contact Torque:	4.0 inch-ounces minimum
Connector Durability:	500 cycles minimum

ENVIRONMENTAL

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

MATERIAL

Body Components:	Corrosion resistant Type 303 (Stainless Steel) Non-Magnetic, per ASTM-A-484 and ASTM-A-582
Center Contacts:	Beryllium Copper per ASTM-B-196, alloy C17300, ASTM Temper (condition) TD04
Dielectric:	PCTFE (KEL-F) per ASTM-D-1430-03 Group 01, Class 1, Grade 3
	Oxide-Noryl (Polyphenylene) per MIL-P-46129
Gaskets & "O" Rings:	Silicone Rubber per ZZ-R-765 & MIL-R-5847 Class 2 A&B, Grades 50-70. (A-A-59588)

FINISH

Body Components:	Passivated per ASTM-A-967 & AMS-QQ-P-35
Center Contacts:	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

(Consult factory for individual product specifications)

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