# Amphenol<sup>®</sup> RF Global RF Solutions

**SMB** Connectors

## **FEATURES & BENEFITS**

Broadband performance with low reflection DC to 4 GHz provides low cost connector combined with high quality.

Quick connect/disconnect snap-on mating reduces installation time.

Various plating options in nickel, gold, and tin. Selective plating provides corrosion resistance finish as well as good solderability characteristics.

SMB PCB slide-on plug and jack allows board-to-board mounting with a low insertion force. This is ideal for mating a high number of connectors on a pair of PCB's.

## APPLICATIONS

Automotive Base Stations Cable Assemblies Components Instrumentation PC/LAN Process Controls Radio Boards Surge Protection Telecom Test and Measurement Video Systems

### **SMB Connectors**

The SMB name derives from SubMiniature B (the second subminiature design). Developed in the 1960's, the interface has both snap-on and slide-on couplings. Amphenol's SMB connectors conform to the requirements of MIL-C-39012, and the interface is in compliance with MIL-STD-348. Available in 50  $\Omega$  and 75  $\Omega$ , the SMB provides broadband capability through 4 GHz with a snap-on connector design and utilizes die cast components on non-critical areas to provide a low-cost solution.

#### **50 Ω SMB Specifications**

Electrical	
Impedance Frequency Range Voltage Rating for RG-188/U Cable Dielectric Withstanding Voltage VSWR	50 $\Omega$ 0-4 GHz with low reflection; can be used up to 10.0 GHz 335 volts at sea level and 85 volts at 70,000 feet RG-196: 750 VRMS; RG-188: 1,000 VRMS Straight connector, RG-196/U: 1.30 + .04 f (GHz) Right angle connector, RG-196/U: 1.45 + .06 f (GHz) Straight connector, RG-188/U: 1.25 + .04 f (GHz) Bight angle connector, RG-188/U: 1.35 + .04 f (GHz)
Contact Resistance	Center contact: $6.0 \text{ m}\Omega$ initial, $8.0$ after environmental; Outer contact: $1.0 \text{ m}\Omega$ initial, $1.5$ after environmental; Braid to body: $1.0 \text{ m}\Omega$ initial, after environmental N/A
Insulation Resistance Insertion Loss	1,000 MΩ minimum Straight connector: 0.30 dB @ 1.5 GHz Right angle connector: 0.60 dB @ 1.5 GHz
RF Leakage	-55 dB minimum @ 2-3 GHz
Mechanical	Shan on coupling for MIL STD 348
Mating Braid/Jacket Cable Affixment Center Conductor Cable Affixment Contact Captivation Cable Retention Engagement Forces	Snap-on coupling per MIL-STD-348 Hex crimp Solder All types unless noted otherwise Equal to breaking strength of cable employed Engagement: 14 lbs maximum Disengagement: 2 lbs minimum After 500 matings, 14 lbs maximum engagement and disengagement
Connector Durability	500 mating cycles minimum
Material	
Center Contact Outer Contact Plating Body Body Plating Insulator Crimp Ferrule	Female: beryllium copper, gold-plated Male: brass or beryllium copper, gold-plated Nickel or gold plating as indicated Brass per QQB-626, or zinc per ASTM B86-71 Nickel or gold plating as indicated PTFE Annealed copper alloy
Environmental	
Temperature Range Thermal Shock Shock Vibration Corrosion	-65°C to + 165°C MIL-STD-202 method 107, test condition B (except high temperatures @ 200°C MIL-STD-202 method 202, method 13, snap-on, test condition B; 75 G's @ 6 milliseconds ½ sine MIL-STD-202 method 204, snap-on, test condition B; (15 G's) MIL-STD-202 method 101, test condition B. 5% salt solution
PLUG	JACK .010 MAX .010 MAX .010 MAX .010 MAX .010 MIN .000 MIN .010 MIN

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