



925-144J-51P

925-123C-51A

Overview

The SMPM product series is a micro-miniature interfaces with a frequency range of DC to 65 GHz. It is commonly used in miniaturized high frequency coaxial applications and is offered in full detent and smooth bore configurations providing secure engagement and disengagement forces.

The family of RF interconnects addresses small package design needs. It can be utilized for high-speed signal transmission applications or in blind-mate board-to-board systems using a floating bullet. This floating bullet provides a link between mated pairs and compensates for both radial and axial misalignment.

With a cable-to-board mated pair, the plug side is available in either right-angle or straight configurations with terminations to both 0.047" and 0.086" semi-rigid or conformable coax, or RG-178 cable. The PCB receptacles are designed for surface, through hole or end launch mounting.

Features and Benefits

- Reliable electrical performance up to 65 GHz
- Small package size
- Push-on and snap-on mating styles for quick installation
- Board-to-board minimum spacing: 8.65 mm

Applications

- Antennas
- Back Plane
- Broadband
- Wireless
- Military
- Instrumentation

Amphenol RF

Four Old Newtown Road
Danbury, CT 06810

For more information visit www.amphenolrf.com
or call 800.627.7100

Ordering Information

SMPM PCB Jacks, Male Contact

	Full Detent	Smooth Bore
Surface Mount	925-143J-51P	925-144J-51P
Through Hole	925-138J-51S	925-137J-51S
Right-Angle	925-140J-51S	925-139J-51S
Edge Mount	925-126J-51P	

SMPM Plugs, Female Contact

	Straight	Right-Angle
0.047" Semi-Rigid	925-124P-51S	925-120C-51R
0.086" Semi-Rigid	925-118C-51S	925-123C-51A
RG-178	925-129C-51S	925-128C-51R
PCB Edge Mount	925-127P-51P	

SMPM Bulkhead Cable Jacks, Male Contact

	Straight
0.047" Semi-Rigid	925-134J-51S
0.086" Semi-Rigid	925-135J-51S
RG-178	925-136J-51S

SMPM Bullet Adapters

Part Number	Bullet Length	Minimum PCB Spacing
925-106A-51S	0.210" (5.33 mm)	0.341" (8.65 mm)
925-207A-51S	0.253" (6.42 mm)	0.384" (9.75 mm)
925-141A-51S	0.278" (7.06 mm)	0.409" (10.38 mm)
925-142A-51S	0.330" (8.38 mm)	0.461" (11.70 mm)



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Technical Specifications

Electrical

Impedance		50Ω
Frequency Range		DC – 26.5 GHz, Typical (Extended Performance to 65 GHz)
Return Loss (Edge Mount PCB)	DC – 10 GHz	1.15 (-23 dB) Max
	10 – 26.5 GHz	1.25 (-19 dB) Max
	26.5 – 40 GHz	1.35 (-16 dB) Max
Insertion Loss		.1 $\sqrt{f(\text{GHz})}$ dB Max
Dielectric Withstanding Voltage		325 VRMS Max
Insulation Resistance		5000 MΩ Min
Center Contact Resistance		6 mΩ Min
Outer Contact Resistance		2 mΩ Min
RF Leakage	DC – 4 GHz	-85 dB Max
Insertion Loss		0.10 dB Max @ 1 GHz
Power Handling		16 W @ 1 GHz @ 25°C

Environmental

Temperature Range	-65°C to +165°C
RoHS Compliance	Compliant with Exemption 6C
Thermal Shock	MIL-STD-202, Method 107, Condition B
Corrosion	MIL-STD-202, Method 204, Condition B
Vibration	MIL-STD-202, Method 204, Condition B
Mechanical Shock	MIL-STD-202, Method 213, Condition A
Moisture Resistance	MIL-STD-202, Method 106

Mechanical

Mating Cycles		100 Min (Full Detent), 500 Min (Smooth Bore)
Coupling Mechanism		Push-On
Center Contact Captivation		≥ 1.5 lbs. (6.7 N) Typical
Engagement Force	Full Detent	4.5 lbs (20 N) Typical
	Smooth Bore	2.5 lbs (28.9 N) Typical
Disengagement Force	Full Detent	≥ 6.5 lbs (28.9 N) Typical
	Smooth Bore	≥ 1.5 lbs (6.7 N) Typical
Axial Misalignment		± 0.25 mm
Radial Misalignment		± 0.51 mm

Note: Technical specifications are typical and may vary by specific part number. Please see component drawing.

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