



925-144J-51P



925-123C-51A

Overview

The SMPM product series is a micro-miniature interface 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 products providing secure engagement/disengagement forces.

This family of 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. The PCB receptacles are designed for surface, through hole, or end launch mounting.

Features and Benefits

- RF performance DC 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

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

SMPM Connectors

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	



925-118C-51S



925-127P-51P



925-143J-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-51R
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



925-134J-51S



925-136J-51S



925-106A-51S

SMPM Bullet Adapters

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

Electrical	
Impedance	50 Ω
Frequency Range	DC to 26.5 GHz, Typical
	Extended performance to 65 GHz
Return loss (edge mount PCB)	1.15:1 Max @ DC to 10 GHz
	1.25:1 Max @ 10 to 26.5 GHz
	1.35:1 Max @ 26.5 to 40 GHz
Insertion loss	$\leq 0.03 \times \text{SQRT}[f \text{ (GHz)}]$ dB
Insulation resistance	$\geq 5 \text{ G}\Omega$
Center contact resistance	$\leq 6 \text{ m}\Omega$
Outer contact resistance	$\leq 2 \text{ m}\Omega$
Dielectric Withstanding Voltage	335 VRMS min.
Contact current	$\leq 15 \text{ A DC}$
RF leakage - Interface	$\geq 80 \text{ dB @ DC to 4 GHz}$

Mechanical data	
Mating cycles	Full detent: ≥ 100
	Limited detent: ≥ 100
	Smooth bore, Catcher's mitt: ≥ 1000
Center contact captivation	axial: $\geq 1.5 \text{ lbs. (6.7 N)}$ typical
Engagement force	Full Detent: 4.5 lbs (20 N) typical
	Smooth Bore: 2.5 lbs (11.1 N) typical
Disengagement force	Full detent: $\geq 6.5 \text{ lbs (28.9 N)}$ typical
	Smooth bore: $\geq 1.5 \text{ lbs (6.7 N)}$ typical
Axial misalignment	$\pm .25 \text{ mm}$
Radial misalignment	$\pm .51 \text{ mm}$
Board-to-board distance (min.)	8.65 mm (solder paste thickness not included)

Environmental data	
Temperature range	-65 °C to +165 °C
Thermal shock	IEC 60169-1, Sub-clause 16.4 (-65 °C to +165 °C)
Climatic category	IEC 60169-1, Sub-clause 18 (+165 °C, 1000 hours)
Vibration	IEC 60068-2-64 random
Shock	IEC 60068-2-27 (50g, 11 ms, half-sine)
Max. soldering temperature (PCB connectors)	IEC 61760-1, +260 °C for 10 sec.