

Series: SMPM Male Straight Through Hole, 50 Ω



Part Number: **SMPM-XX-P-HF-ST-TH-1**

INTERFACE OPTIONS
 -PF: PLUG FULL DETENT
 -PS: PLUG SMOOTH BORE
 -PC: PLUG CATCHER'S MITT

MATERIAL AND FINISHES

Connector part	Material	Finish
Shell	Beryllium Copper	50 μ " Gold over Nickel
Bushing	Beryllium Copper	10 μ " Gold over Nickel
Pin	Beryllium Copper	30 μ " Gold over Nickel
Insulator	PTFE	N/A
Locking Ring	Beryllium Copper	3 μ " Gold over Nickel

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ELECTRICAL DATA

Impedance	50 Ohm
Frequency Range	DC to 26.5 GHz (TH frequency limited by launch)
VSWR ¹	DC to 26.5 GHz: 1.40:1 max
Insertion Loss ¹	$0.04 \times \sqrt{F(GHz)} \text{ dB max}$
Center Contact Resistance	<6.0 m Ω
Insulation Resistance	5,000 M Ω Min
Outer Contact Resistance	<2.0 m Ω
Voltage Rating (Sea Level)	240 VRMS Max
Dielectric Withstanding Voltage (DWV)	700 VRMS Min

¹ per connector

MECHANICAL DATA

Interface	I.A.W. MIL-STD-348 fig's. 328-X
Mating Cycles	Full Detent: 100 Cycles Smooth Bore: 500 Cycles Catcher's Mitt: 500 Cycles
Engagement Force	Full Detent: 35 N (8 lbs.) Max Smooth Bore: 18 N (4 lbs.) Max Catcher's Mitt: 18 N (4 lbs.) Max
Disengagement Force	Full Detent: 13 N (3 lbs.) Min Smooth Bore: 2 N (0.5 lbs.) Min Catcher's Mitt: 2 N (0.5 lbs.) Min
Center Contact Retention	17.8 N (4.0 lbs.) Min
Radial Misalignment	+/- 0.20 mm (0.010 In.) Max
Axial Misalignment	0.20 mm (0.010 In.) Max
Mass	0.34g (0.012 oz.)

ENVIRONMENTAL DATA

Temperature Range	-65 to 150°C
Thermal Shock	EIA-364-32, -55 to +125°C, 100 Cycles
Vibration	EIA-364-28, Condition V-B, 2 hrs./axis
Mechanical Shock	EIA-364-27, Condition G

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REFERENCED DOCUMENTS

Interface	Drawing & Footprint
Full Detent	Full Detent Drawing
Smooth Bore	Smooth Bore Drawing
Catcher's Mitt	Catcher's Mitt Drawing

PROCESSING RECOMMENDATIONS

Due to variances in equipment, solder, flux, and board design, Samtec does not recommend specific wave solder profiles for our connectors. The processing parameters provided by the flux manufacturer should be employed and can usually be found on their website.

For a lead-free wave process, the pot temperature (~260-270C) and contact time (~4 seconds) will likely be similar for most solders and fluxes, however different fluxes can require substantially different pre-heat temperatures.

For a tin-lead wave process, a pot temperature in the range of 230-250C and contact time of ~4 seconds is typically recommended.

Samtec strongly recommends a thorough thermal profile study be performed to fully understand the dynamics of your overall application.

For further discussion, please contact Samtec's Interconnect Processing Group (IPG) at ipg@samtec.com or 1-800-726-8329.

Cleaning: Samtec, Inc. has verified that our connectors may be cleaned in accordance with the solvents and conditions designated in the EIA-364-11A standard.

USE OF PRODUCT SPECIFICATION SHEET

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