

SMPS Interconnect Series



SMPS Connector Product Line

INTRODUCTION

Amphenol CIT SMPS series is designed to satisfy the demand for increased package density and reduced weight in microwave systems. The sub-miniature, lightweight, blind-mateable interconnect solution is ideal for complex high-performance microwave modules and systems where weight is the primary issue. Amphenol CIT's SMPS series is a perfect solution for military radios, radars, space, and test applications.

The design of the push-on interface enables use in microwave modules and dense packages, and facilitates rapid assembly and testing. The available bullet sizes allow for a PCB stackable height of <0.120". The ability to tolerate radial and axial misalignment allows for multiple engagement/disengagement cycles without degradation in electrical performance.

FEATURES

- Frequency range: DC – 65 GHz
- 50 Ω impedance; blind-mateable configuration
- Bullet available for PCB stackable height of <0.120"
- MIL-STD-202 compliant
- Ability to withstand radial/axial misalignment
- Adapters, board-mount, field-replaceable, bullets, and cable connector configurations
- Custom connectors available

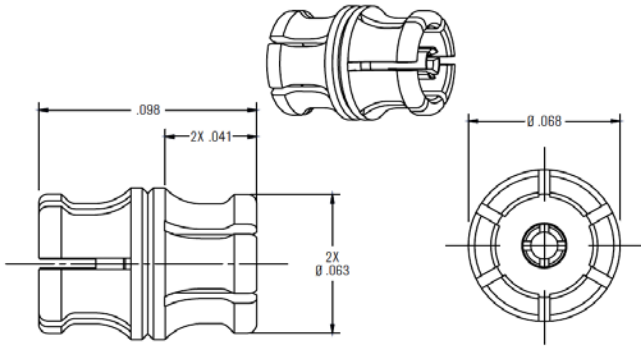
SPECIFICATIONS

Parameter		Specifications
Impedance		50 Ω
Frequency Range		DC – 65 GHz
VSWR	1.15:1	DC – 26.5 GHz
	1.33:1	> 26.5 – 50 GHz
	1.50:1	> 50 – 65 GHz
Insertion Loss		.05xv/f (GHz)
DWV @ Sea Level		250 Vrms
Insulation Resistance		3500 MΩ/min
RF High Pot		150 Vrms @ 5 MHz
Radial Misalignment		+/- .010 inches
Axial Misalignment		.010 inches
Temperature Range		-55 °C – 165 °C
Thermal Shock		MIL-STD-202, Method 107, Cond B.
Moisture Resistance		MIL-STD-202, Method 106, Except Step 7b
Corrosion		MIL-STD-202, Method 101, Cond B.
Vibration		MIL-STD-202, Method 204, Cond D.
Shock		MIL-STD-202, Method 213, Cond I.
Force to Engage	Limited Detent	2.5 lbs typical
	Smooth Bore	1.5 lbs typical
Force to Disengage	Limited Detent	6.0 lbs typical

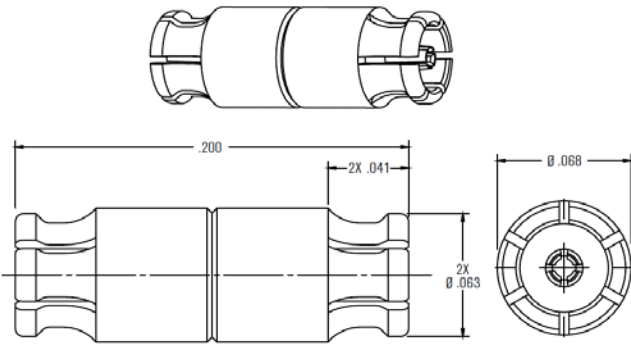
SMPS Interconnect Series Configurations

BULLETS

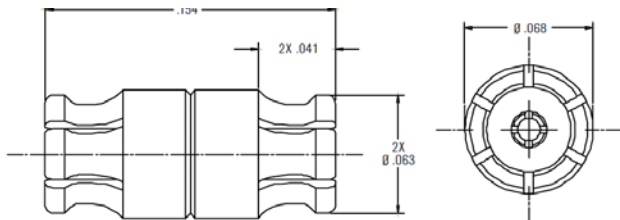
SMPS Female to SMPS Female Straight/WP101-1CC



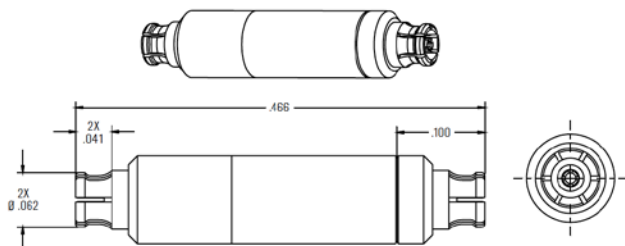
SMPS Female to SMPS Female Bullet/WP101-2CC



SMPS Female to SMPS Female Bullet/WP101-3CC

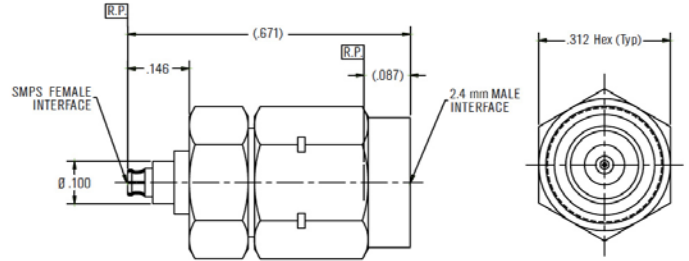


SMPS Female to SMPS Female Bullet/WP101-4CC

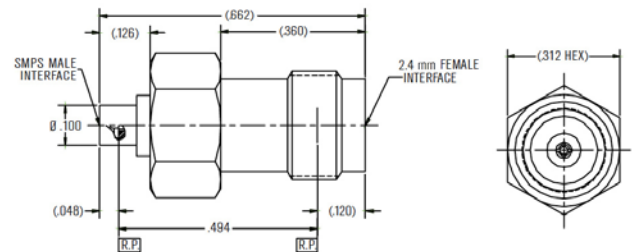


ADAPTERS

SMPS Female Straight to 2.4 Male/WP140-1CCSF

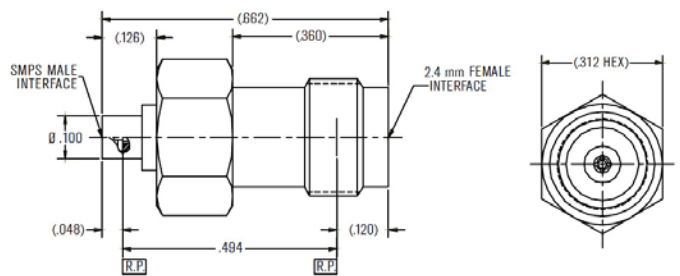


SMPS Male Straight to 2.4 mm/WP141



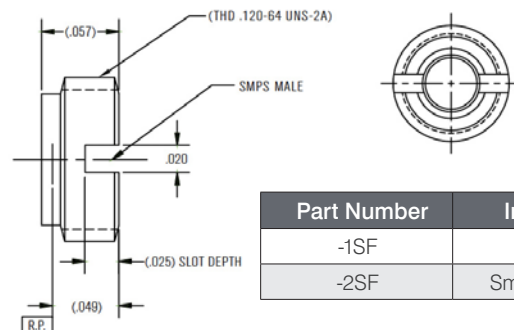
Part Number	Interface
-1CCSF	Detent
-2CCSF	Smooth Bore

SMPS Female Straight to 2.4 mm Female/WP142-1CCSF



SHROUDS

SMPS Shroud, Thread in Style/WP202

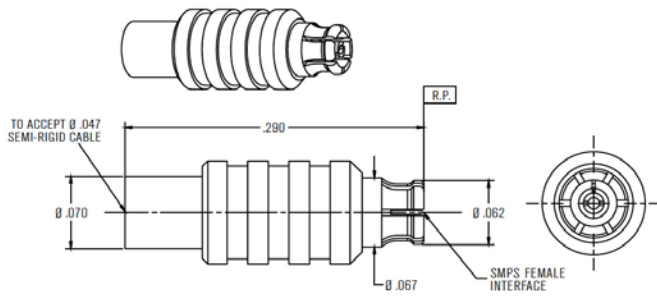


Part Number	Interface
-1SF	Detent
-2SF	Smooth Bore

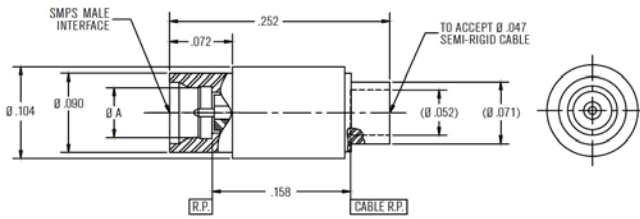
SMPS Interconnect Series Configurations Cont'd.

CABLE CONNECTORS

SMPS Female Straight to \varnothing .047 Semi-Rigid Cable/WP107-1CC

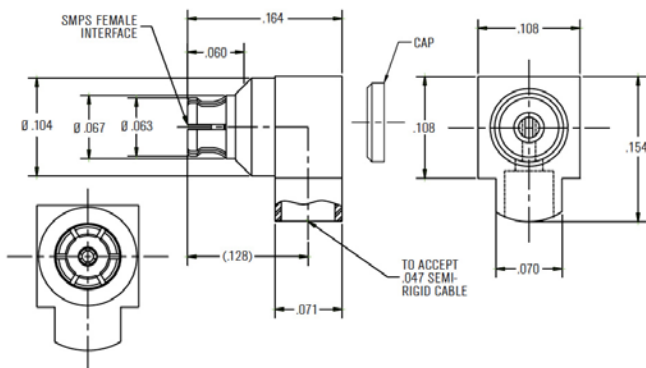


SMPS Male Straight to .047 Semi-Rigid Cable/WP108



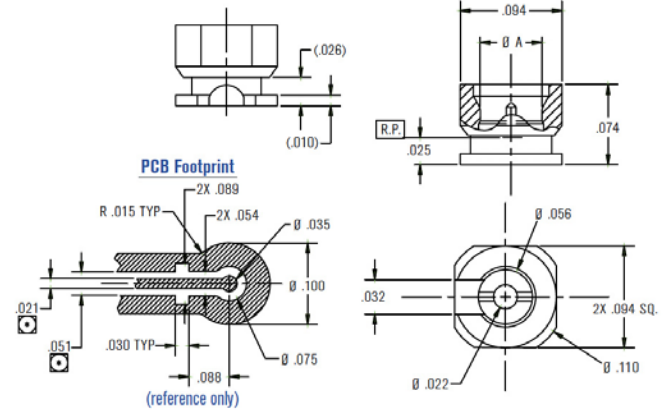
Part Number	Interface
-1CC	Detent
-2CC	Non-Detent

SMPS Female Miter R/A to \varnothing .047 Semi-Rigid Cable/WP148-CC



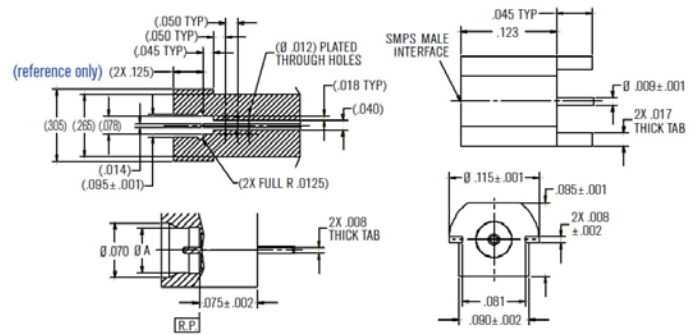
PC BOARD CONNECTORS

SMPS Male Straight Surface Mount/WP350



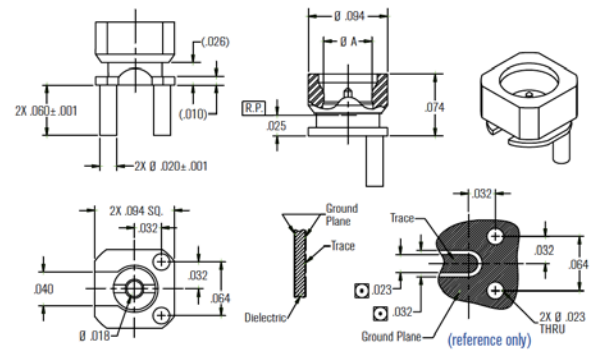
Part Number	Interface
-1CC	Detent
-2CC	Non-Detent

SMPS Male PCB Edge Mount to Straight Termination/WP351



Part Number	Interface
-1CC	Detent
-2CC	Non-Detent

SMPS Male Straight Surface Mount (w/2 Posts) / WP355

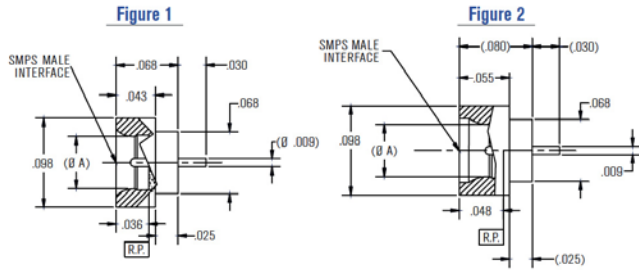


Part Number	Interface
-1CC	Detent
-2CC	Non-Detent

SMPS Interconnect Series Configurations Cont'd.

HERMETICS

SMPS Male to Straight Termination/WP122



Part Number	Interface	Figure
-1CC	Detent	1
-2CC	Non-Detent	1
-3CC	Detent	2
-4CC	Smooth Bore	2

MATERIALS & FINISHES

Metal	Specification
BeCu (Beryllium Copper)	ASTM B 196 and/or ASTM B 197
Brass	ASTM B 36, B121, B16, B16M
Stainless Steel	ASTM A484/A582 or A555/581
Iron-Nickel-Cobalt	ASTM F-15

Dielectric	Specification
Virgin PTFE Fluorocarbon	ASTM D 1710 and ASTM D 1457
Polyamide-Imide	ASTM D5204 Group 2 Class 1
Glass	Corning 7070 or Equivalent

Finish	Specification
Gold (75u in. Typ.)	ASTM-B488 Type 1, Class 1.25
Nickel (100u in. Typ.)	SAE AMS-QQ-N-290
Passivation	ASTM A967

ORDERING INFORMATION

Configuration	Part Number	Description	Detent
Cable Connectors	WP108-1CC	SMPS (male) straight connector for 0.047" semi-rigid cables	N/A
	WP107-1CC	SMPS (female) straight connector for 0.047" semi-rigid cables	N/A
	WP148-1CC	SMPS (female) right angle connector for 0.047" semi-rigid cables	N/A
PC Board Connectors	WP351-1CC	SMPS plug (male) Edge Mount to straight termination	Limited
	WP351-2CC		Smooth Bore
	WP350-1CC	SMPS plug (male) Surface Mount to straight termination	Limited
	WP350-2CC		Smooth Bore
	WP355-1CC	SMPS plug (male) Surface Mount to straight termination (w/ 2 posts)	Limited
	WP355-2CC		Smooth Bore
Bullets	WP101-1CC	SMPS (female) to SMPS (female) adapter, 0.098" length	N/A
	WP101-2CC	SMPS (female) to SMPS (female) adapter, 0.20" length	N/A
	WP101-3CC	SMPS (female) to SMPS (female) adapter, 0.154" length	N/A
	WP101-4CC	SMPS (female) to SMPS (female) adapter, 0.466" length	N/A
Shrouds	WP202-1SF	SMPS Shroud, Thread-in	Limited
	WP202-2SF		Smooth Bore
	WP203-1SF	SMPS Shroud, 2-hole flange mount	Limited
	WP203-2SF		Smooth Bore
Hermetics	WP122-1CC	SMPS (male) to straight termination (hermetically sealed), 0.043" length	Limited
	WP122-2CC		Smooth Bore
	4004-17	Feedthrough	N/A
Adapters*	WP140-1CCSF	SMPS (female) to 2.4 mm (male) straight adapter	N/A
	WP141-1CCSF	SMPS (male) to 2.4 mm (female) straight adapter	Limited
	WP141-2CCSF		Smooth Bore
	WP142-1CCSF	SMPS (female) to 2.4 mm (female) straight adapter	N/A
Tools	T-6183	Insertion/Withdrawal tool	N/A

Parts with a 'CC' suffix are Gold Plated/Parts with a 'CCSF' suffix are Passivated Steel. | *Standard Adapters have a Passivated Steel finish. Gold finish options also available.