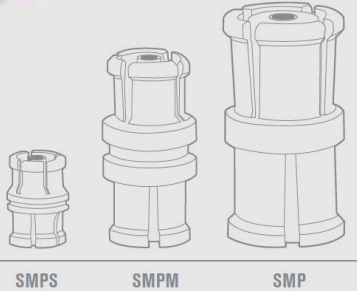


# SMPS Interconnect Series



SMPS Connector Product Line

Scale Comparison



## INTRODUCTION

Carlisle Interconnect Technologies' (CarlisleIT) 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. CarlisleIT'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

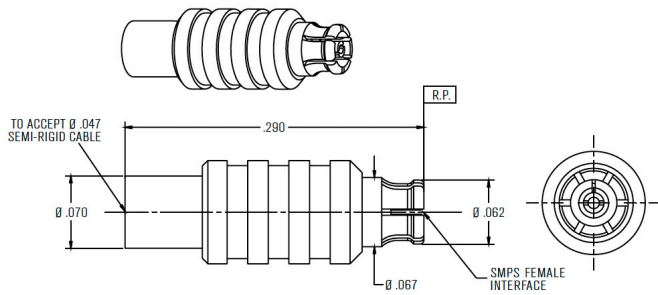
Parameter		Specifications
Impedance		50 Ω
Frequency Range		DC – 65 GHz
VSWR	1.15:1	DC – 26.5 GHz
	1.33:1	> 26.5 – 50 GHz
	1.50:1	> 50 – 65 GHz
Insertion Loss		.05xvf (GHz)
DWV @ Sea Level		250 Vrms
Insulation Resistance		3500 MΩ/min
RF High Pot		150 Vrms @ 5 MHz
Radial Misalignment		+/- .010 inches
Axial 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



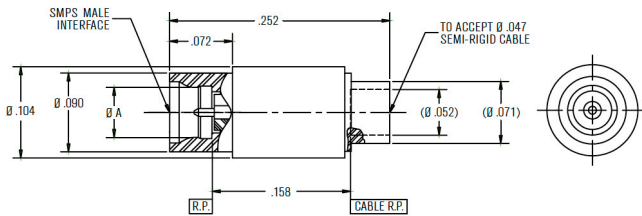
# SMPS Interconnect Series Configurations Cont'd.

## CABLE CONNECTORS

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

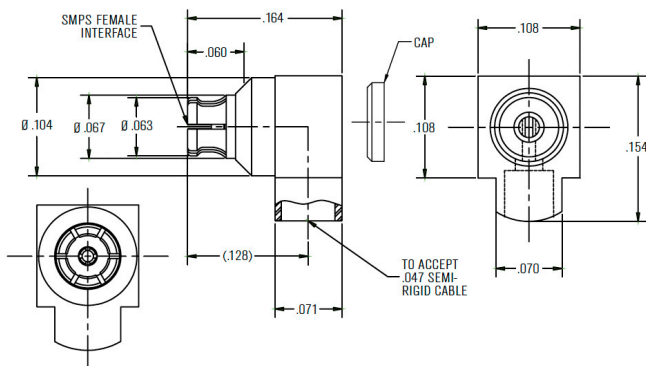


### SMPS Male Straight to .047 Semi-Rigid Cable/WP108



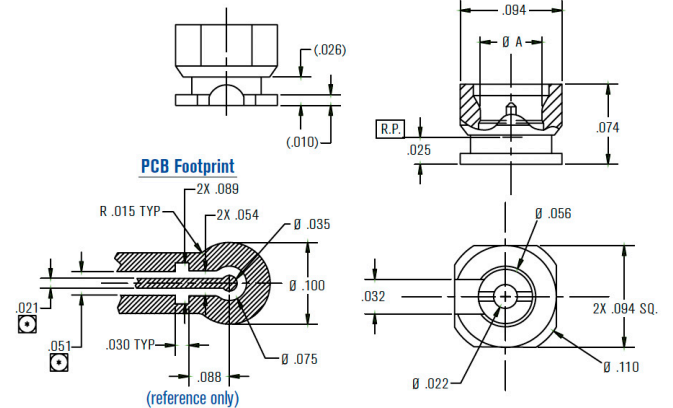
Part Number	Interface
-1CC	Detent
-2CC	Non-Detent

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



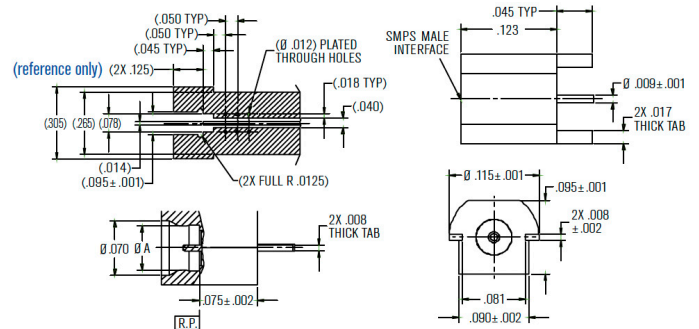
## PC BOARD CONNECTORS

### SMPS Male Straight Surface Mount/WP350



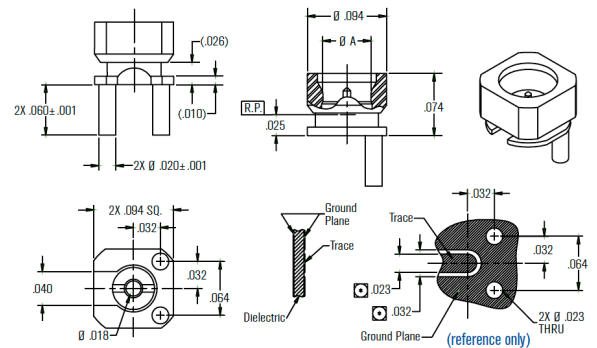
Part Number	Interface
-1CC	Detent
-2CC	Non-Detent

### 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

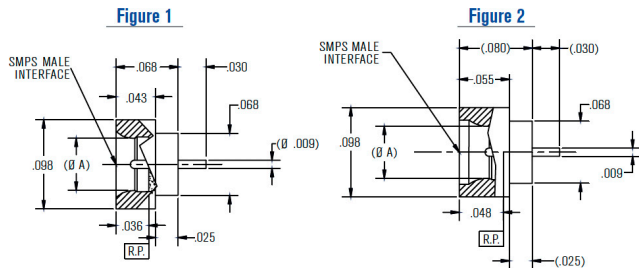


Part Number	Interface
-1CC	Detent
-2CC	Non-Detent

# 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.



See CarlisleIT's SMPS Connector Product Line:  
[CarlisleIT.com/prod-info/smps-interconnect-series](http://CarlisleIT.com/prod-info/smps-interconnect-series)

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