Scale Comparison

WMP   SSMP   SMP

INTRODUCTION

Carlisle Interconnect Technologies WMP® series is designed to satisfy 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 WMP series are 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 – 100 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	Specification
Impedance	50 Ω
Frequency Range	DC - 100 GHz*
VSWR	1.10 : 1 to 26.5 GHz 1.25 : 1 to 65 GHz
Insertion Loss	$.05 \times \sqrt{f}$ (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 to +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	4.5 lbs typical
Smooth Bore	1.0 lbs typical

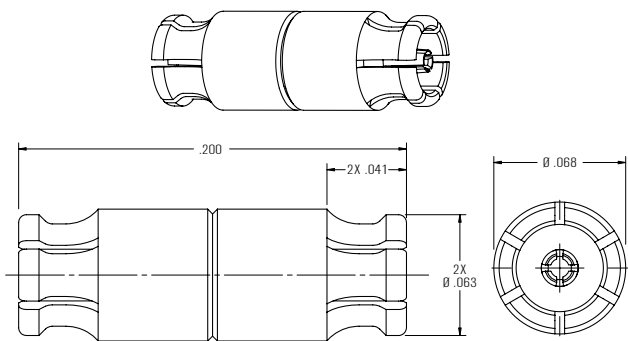*Tested to 65 GHz

ITAR FREE

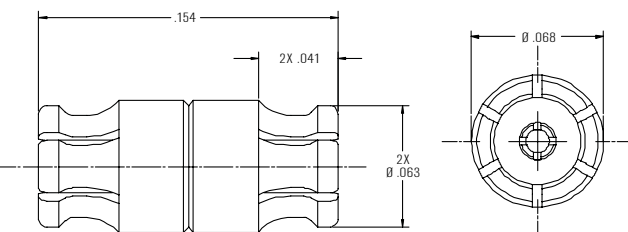# WMP® Configurations

ADAPTERS

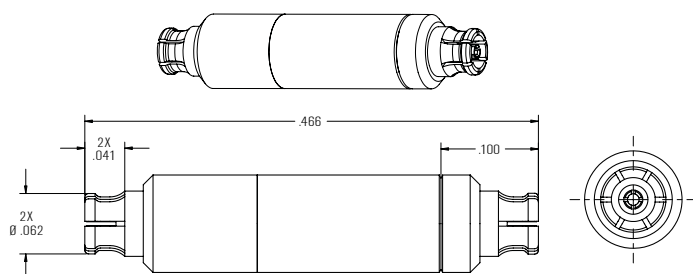### WMP® Female to WMP® Female Straight Bullet / WP101-1CC
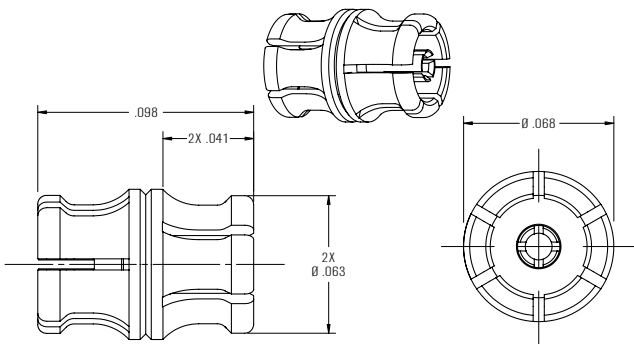
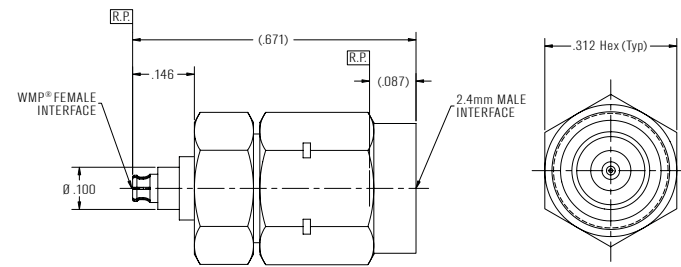### WMP® Female to WMP® Female Bullet / WP101-2CC
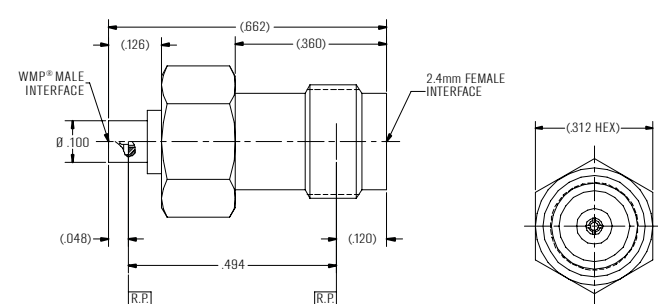

WMP® Female to WMP® Female Bullet / WP101-3CC

WMP® Female to WMP® Female Bullet / WP101-4CC
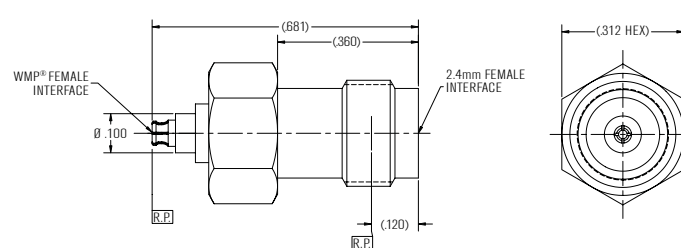

WMP® Female Straight to 2.4mm Male / WP140-1CCSF
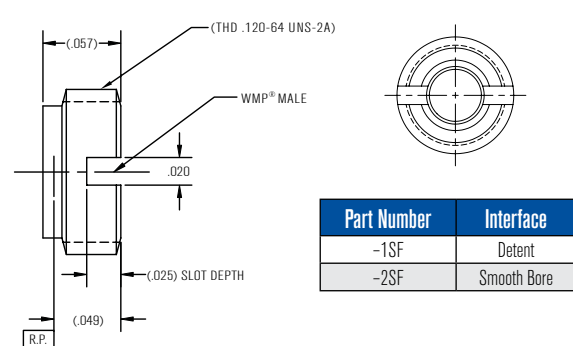

WMP® Male Straight to 2.4mm Female / WP141

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

WMP® Female Straight to 2.4mm Female / WP142-1CCSF

SHROUDS

WMP® Shroud, Thread in Style / WP202

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

CABLE CONNECTORS

WMP® Female Straight to Ø .047 Semi-Rigid Cable / WP107-1CC
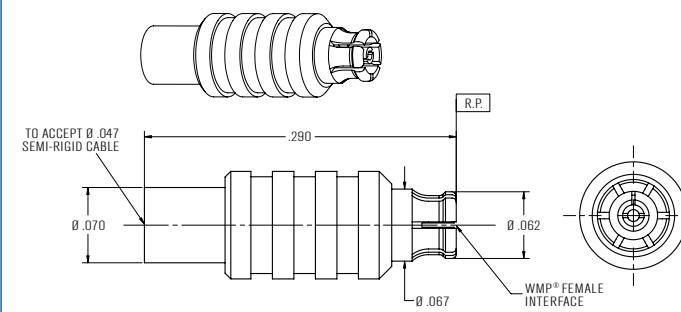
WMP® Male Straight to .047 Semi-Rigid Cable / WP108
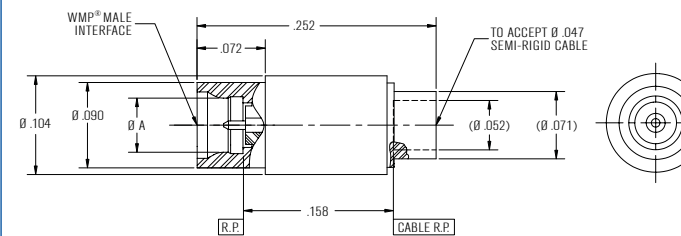
Part Number	Interface
–1CC	Detent
–2CC	Non-Detent

WMP® Female Miter R/A to Ø .047 Semi-Rigid Cable / WP148-CC
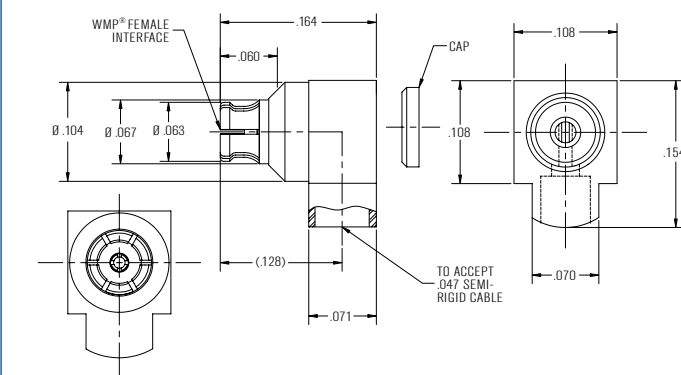
PC BOARD CONNECTORS

WMP® Male Straight Surface Mount / WP350

PCB Footprint

(reference only)
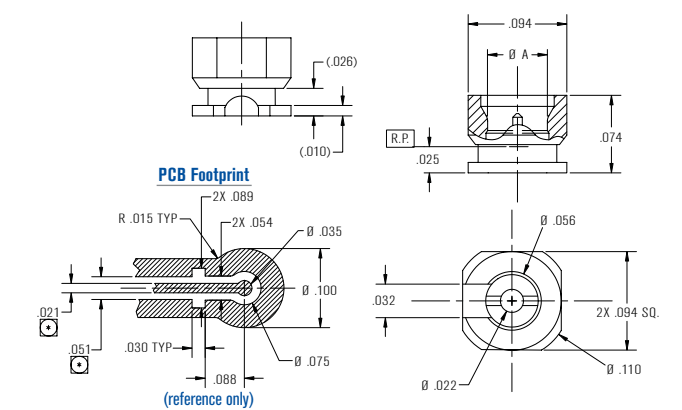
Part Number	Interface
–1CC	Detent
–2CC	Non-Detent

WMP® Male PCB Edge Mount to Straight Termination / WP351
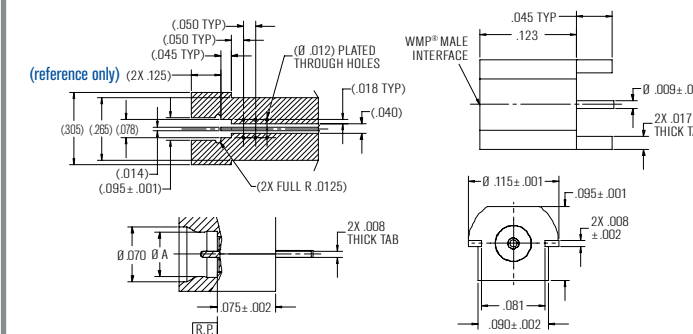
Part Number	Interface
–1CC	Detent
–2CC	Non-Detent

WMP® Male Straight Surface Mount (w/ 2 Posts) / WP355
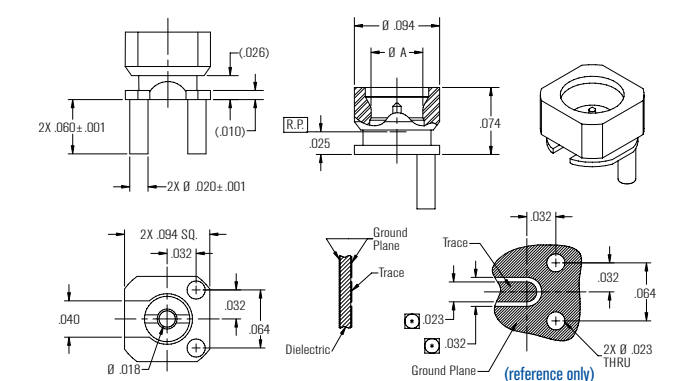
Part Number	Interface
–1CC	Detent
–2CC	Non-Detent

HERMETICS

WMP® Male to Straight Termination / WP122

Figure 1

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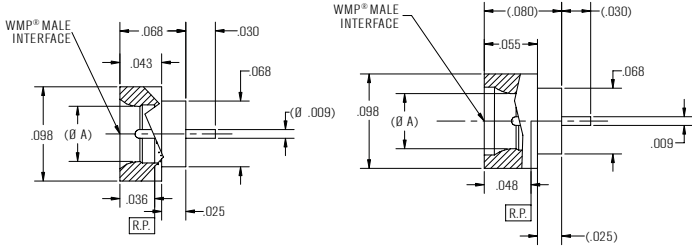
Part Number	Interface	Figure
–1CC	Detent	1
–2CC	Smooth Bore	1
–3CC	Detent	2
-4CC	Smooth Bore	2

Materials & Finish

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
Pasivation	ASTM A967

Ordering Information

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

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.

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