

# WSMP™ Coaxial RF Connectors and RF Coaxial Cable Assemblies

For High Density Applications to 100GHz



- Signal Integrity to 100GHz
- Center to Center Spacing 2.15 mm (0.085")  
Board to Board Height of 3.05 (0.120")
- 45% Smaller Than SMP  
35% Smaller Than Mini SMP (SMPM)
- Custom Footprints for Optimized RF Performance on Your PC Board
- Custom RF Cable Assemblies for Your Application
- R100 Series and R65 Series Products On Request

## SPECIFICATIONS

### Interface

According to Rosenberger WSMP™ Interface standards

### Material and plating

Connector parts	Material	Plating
Center contact	CuBe	Gold
Outer contact	CuBe	Gold
Dielectric	PTFE, Polyimide, or Corning 7070™ Glass*	

### Electrical data

Impedance	50 Ω
Frequency	DC to 100 GHz
Return loss (typical)	≥ 26 dB, DC to 26.5 GHz ≥ 19 dB, 26.5 to 65 GHz
Insertion loss	≤ 0.12 x √f(GHz) dB
Insulation resistance	≥ 3.5 x 10 <sup>3</sup> MΩ
Center contact resistance	≤ 2.0 mΩ
Outer contact resistance	≤ 6.0 mΩ
Test voltage (at sea level)	250 V rms
RF High Potential (at sea level)	150 V rms @ 5 MHz
RF-leakage (optional)	≥ -80 dB (typical mated pair)

### Mechanical data

Mating cycle	
Full Detent (FD)	≥ 100
Smooth Bore (SB)	≥ 500

### Mechanical data

Engagement force (typical)		
Full Detent (FD)	11 N	2.47 Lbs.
Smooth Bore (SB)	5.3 N	1.19 Lbs.
Disengagement force (typical)		
Full Detent (FD)	20 N	4.5 Lbs.
Smooth Bore (SB)	4.45 N	1.0 Lbs.

### Axial Mis-Alignment

.000-.005 inches

### Radial Mis-Alignment

+/- .010 inches

### Environmental data

Temperature range	-55° C to +165° C
Thermal shock	MIL-STD-202, Meth. 107, Cond. B
Corrosion	MIL-STD-202, Meth. 101
Vibration	MIL-STD-202, Meth. 204, Cond. D
Shock	MIL-STD-202, Meth. 213, Cond. I
Moisture resistance	MIL-STD-202, Meth. 106, except Step 7B
Max. soldering temperature (optional)	IEC 61760-1, +260°C for 10 sec.
2002/95/EC (RoHS)	Compliant

\*Hermetically-sealed to 1 x 10<sup>-8</sup> cc/sec, On Request

### Tooling

WSMP Cable Connector Prybar	W1W001-000
WSMP Right Angle Prybar Extraction Tool	W1W005-000
WSMP Bullet Insertion/ Extraction Tool	W1W002-000
Low Profile	

## CABLE CONNECTORS

**Description**  
WSMP Female Straight  
for .047 S/R Cable

**Part Number**  
W1K101-270D3



**Description**  
WSMP Female Right Angle  
for .047 S/R Cable

**Part Number**  
W1K201-270D3



**Description**  
WSMP Male Straight  
for .047 S/R Cable

**Part Number**  
FD: W1S101-270D3  
SB: W1S141-270D3



**Description**  
WSMP Male Straight Bulkhead  
for .047 S/R Cable

**Part Number**  
FD: W1S501-270D3  
SB: W1S541-270D3



## STANDARD

**Description**  
WSMP Male PCB, Straight, SMT, J-Lead

**Part Number**  
FD: W1S105-40ML5  
SB: W1S145-40ML5

**Hi Temp (Kovar/Glass)**  
WSMP Male PCB, Straight, SMT, J-Lead

**Part Number**  
FD: W1S103-40MZ9  
SB: W1S143-40MZ9



## STANDARD

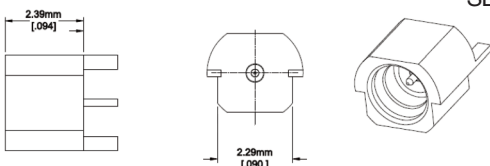
**Description**  
WSMP Male PCB Edge Mount

**Part Number**  
FD: W1S203-40ML5  
SB: W1S243-40ML5



**Hi Temp (Kovar/Glass)**  
WSMP Male PCB Edge Mount

**Part Number**  
FD: W1S204-40MZ9  
SB: W1S244-40MZ9



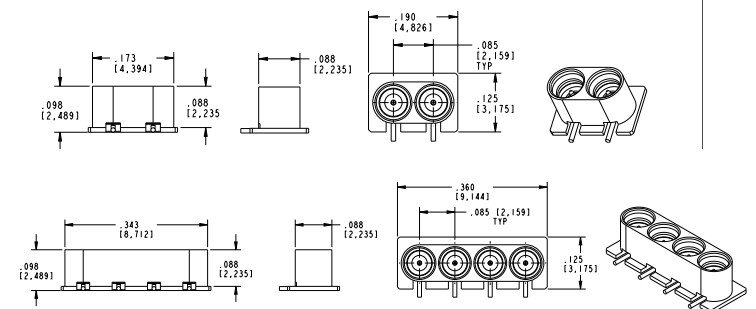
## STANDARD

**Description**  
WSMP St Male MultiPort Arrays, SB

**Part Number**  
2 Port: W1S10A-40ML5  
4 Port: W1S10B-40ML5

**Hi Temp (Kovar/Glass)**  
WSMP St Male MultiPort Arrays, SB

**Part Number**  
2 Port: W1S12A-40MZ9  
4 Port: W1S12B-40MZ9



## ADAPTERS

### Description

WSMP Female Blindmate Interconnect (Bullet)



Part Number	A (mm)	A (in)	Part Number	A (mm)	A (in)
W1K10A-K00D3	2.49	0.098	W1K10J-K00D3	7.62	0.300
W1K10C-K00D3	3.18	0.125	W1K10M-K00D3	10.16	0.400
W1K10F-K00D3	3.81	0.150	W1K10N-K00D3	12.70	0.500
W1K10G-K00D3	5.08	0.200	W1K10P-K00D3	15.24	0.600
W1K10H-K00D3	6.35	0.250			

Additional lengths available on request

## BETWEEN SERIES TEST ADAPTERS

### Description

WSMP Male Full Detent to RPC-2.92 Female Adapter  
 RPC-2.40 Female Adapter  
 RPC-1.85 Female Adapter



### Part Number

W1S102-K00D3 to 40 GHz

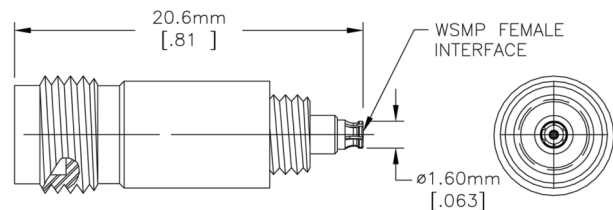
W1S109-K00D3 to 50 GHz

W1S108-K00D3 to 67 GHz

## BETWEEN SERIES TEST ADAPTERS

### Description

WSMP Female to RPC-2.92 Female Adapter  
 RPC-2.40 Female Adapter  
 RPC-1.85 Female Adapter



### Part Number

W1K102-K00D3 to 40 GHz

W1K109-K00D3 to 50 GHz

W1K108-K00D3 to 67 GHz

## TERMINATIONS

### Description

WSMP Male 50 Ohm Termination,  
 Full Detent, 0.25 W

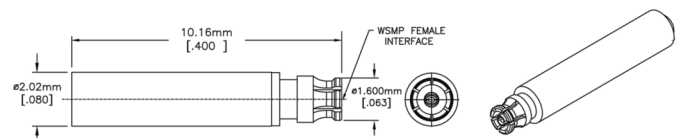
**Part Number**  
 W1S15T-0.2D3



### Description

WSMP Female 50 Ohm  
 Termination, 0.25 W

**Part Number**  
 W1K15T-0.2D3



## WSMP™ CABLE ASSEMBLIES

**Description:** WSMP Female Straight on .047 Flexible, Formable, Semi-Rigid to RPC 2.92 Male, RPC 2.40 Male and RPC 1.85 Male



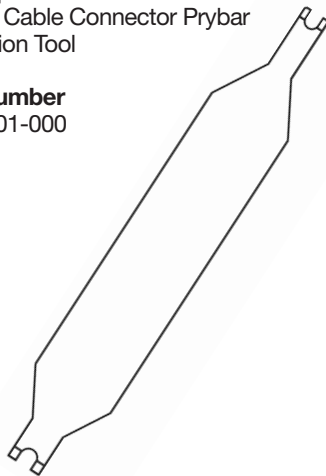
## CUSTOM FOR YOUR NEEDS.

### TOOLS

#### Description

WSMP Cable Connector Prybar  
Extraction Tool

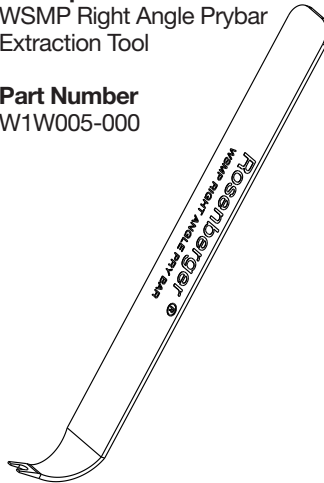
**Part Number**  
W1W001-000



#### Description

WSMP Right Angle Prybar  
Extraction Tool

**Part Number**  
W1W005-000



#### Description

WSMP Bullet Insertion/  
Extraction Tool, Low Profile

**Part Number**  
W1W002-000



For items contained in this brochure, please call 717-859-8900, extension 234. Email: [info@rosenbergerna.com](mailto:info@rosenbergerna.com)

Rosenberger of North America, LLC  
1100 Professional Drive  
Suite 100  
Plano, Texas 75074  
Telephone: +972-423-8991  
Fax: +1-972-424-7521  
[www.rosenberger.com/us\\_en](http://www.rosenberger.com/us_en)

Rosenberger  
Hochfrequenztechnik GmbH & Co. KG  
P.O. Box 1260  
D-84526 Tittmoning  
Telephone: +49-86 84-18-0  
Fax: +49-86 84-18-499  
[www.rosenberger.de](http://www.rosenberger.de)

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.