

The main title of the catalog, 'RF Interconnects and Cable Assemblies', is displayed in a large, bold, white, sans-serif font. The background is a dark blue gradient with a faint, glowing network of white lines and nodes, overlaid with images of a satellite and a fighter jet.

# RF Interconnects and Cable Assemblies

- MILITARY • AEROSPACE • HIGH SPEED DIGITAL
- INDUSTRIAL • TEST AND INSTRUMENTATION



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## SV Microwave - About Us

SV Microwave is a world leader in the RF/Microwave industry with over 40 years of proven performance. We design and manufacture RF/Microwave coaxial connectors, cable assemblies and passive components for military, satellite, aerospace, commercial and telecommunications applications.

We specialize in customized application specific solutions, but also offer a wide range of Commercial Off The Shelf (COTS) products shown in this catalog. When it comes to the design and manufacture of precision products, SV Microwave has set the standard.

SV Microwave is committed to helping our customers meet their RF/Microwave performance goals with our highly talented engineering team, outstanding customer service and precision manufacturing capabilities.

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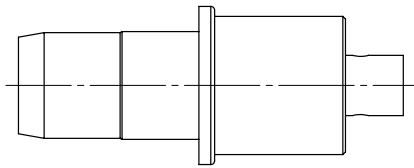
Rev. 3 (01/18)

# Coaxial Contacts

## Coaxial Contacts Interface at a Glance

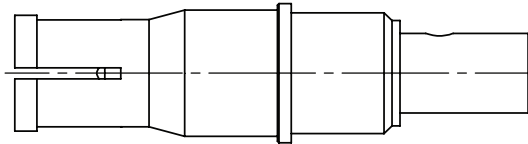
System design and platform needs have required smaller packaging with RF, D/C signal and power all in close proximity. Our proven designs and blindmate technology have enabled the integration of multiport RF signals into single housings for gang mating capability. Various existing form factors such as D38999, ARINC, Micro-D and D-Sub have provided standard components and familiar shell sizes. Hybrid technology fuses RF and D/C contacts into a single connector simplifying design and installation while eliminating discrete wiring.

### Pin D38999 Cable Contact (Size 8)



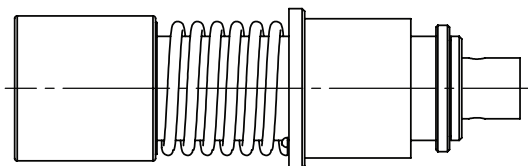
Cable	Series	Part Number	Freq.
0.085	BMA	<a href="#">SF9421-6000</a>	26.5 GHz
0.085	BMZ	<a href="#">SF9821-6000</a>	18 GHz
0.085	NSME	<a href="#">8001-4107</a>	3 GHz

### Socket D38999 Cable Contact (Size 8)



Cable	Series	Part Number	Freq.
0.085	NSME	<a href="#">8001-4108</a>	3 GHz

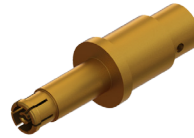
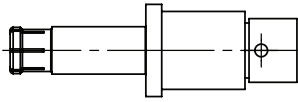
### Socket D38999 Cable Contact (Size 8), Spring Loaded



Cable	Series	Part Number	Freq.
0.085	BMA	<a href="#">SF9411-6000</a>	26.5 GHz
0.085	BMZ	<a href="#">SF9811-6000</a>	18 GHz

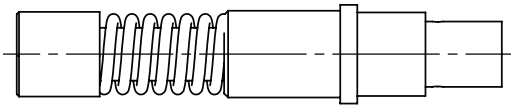
# Coaxial Contacts

## Pin D38999 Cable Contact (Size 12)



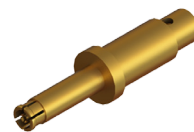
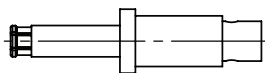
Cable	Series	Part Number	Freq.
0.085	NSME	<a href="#">8001-4102</a>	3 GHz
0.085	SMPM	<a href="#">3221-4002</a>	50 GHz

## Socket D38999 Cable Contact (Size 12)



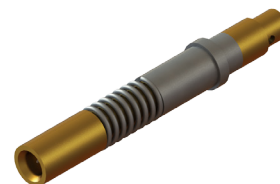
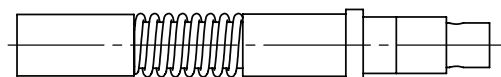
Cable	Series	Part Number	Freq.
0.085	NSME	<a href="#">8001-4104</a>	3 GHz
0.085	SMPM	<a href="#">SF3211-6004</a>	50 GHz

## Pin D38999 Cable Contact (Size 16)



Cable	Series	Part Number	Freq.
0.047	SMPS	<a href="#">9921-40001</a>	50 GHz

## Socket D38999 Cable Contact (Size 16)



Cable	Series	Part Number	Freq.
0.047	SMPS	<a href="#">SF9911-60001</a>	50 GHz

# SMA Series

## SMA Interface at a Glance

SMA is an acronym for SubMiniature version A and was developed in the 1960's. Using a threaded interface, 50 Ohm SMA connectors are precision subminiature units that provide excellent electrical performance from DC to 26.5 GHz. These high-performance connectors are compact in size and mechanically have outstanding durability. Built in accordance with MIL-PRF-39012 and CECC 22110/111, SMA connectors can be mated with all connectors that meet these spec mating diameters regardless of manufacturer.

### Electrical Specifications

Impedance	50Ω
Frequency	18 GHz (select models to 26.5 GHz)
VSWR	1.05 + .005 f
Insertion Loss	.03 √ f
Shielding Effectiveness	≥ -90 - f dB
Dielectric Withstanding Voltage	1000 VRMS

### Mechanical Specifications

Mating Cycles	500
Mating Torque	7 - 10 in - lbs

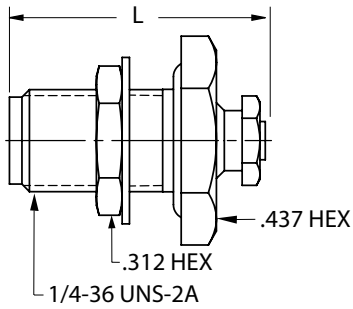
### Environmental Specifications

Temperature Rating	-65°C to +165°C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D, 20 Gs
Shock	MIL-STD-202, Method 213, Condition I, 100 Gs
Thermal Shock	MIL-STD-202, Method 107. Cond. B, -65°C to +125°C
Moisture Resistance	MIL-STD-202, Method 106, Less Step 7B
Barometric Pressure (Altitude)	MIL-STD-202, Method 105, Condition C, 70k Ft.

Note: Specifications, dimensions and images are typical for the series and may vary by part number

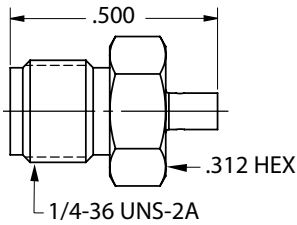
# SMA Series

## Female Bulkhead Cable Connector



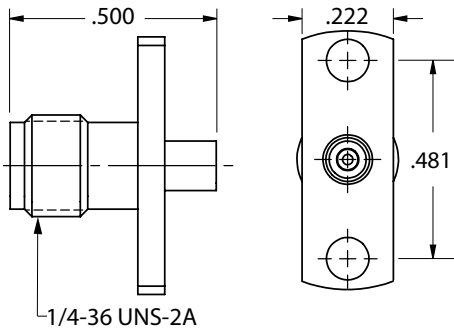
Cable	Part Number	L
0.047	<a href="#">2944-6001</a>	.618"
0.085	<a href="#">2946-6012</a>	.575"
0.085	<a href="#">M39012/83-3007</a>	.625"
0.141	<a href="#">2942-6045</a>	.750"

## Female Cable Connector



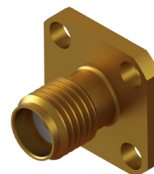
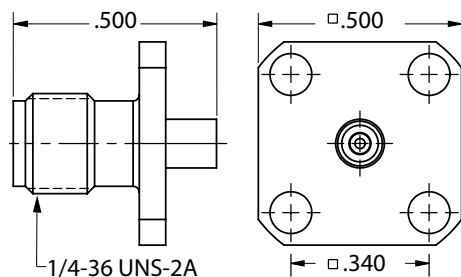
Cable	Part Number
0.047	<a href="#">2926-6015</a>
0.085	<a href="#">2921-6002</a>
0.141	<a href="#">2922-6007</a>

## Female Flange Mount Cable Connector, 2 Hole



Cable	Part Number
0.085	<a href="#">2933-6001</a>

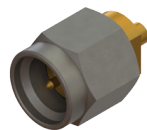
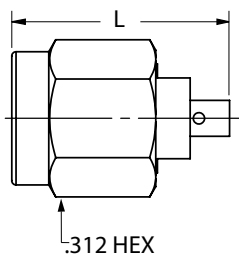
## Female Flange Mount Cable Connector, 4 Hole



Cable	Part Number
0.085	<a href="#">2933-6004</a>
0.085	<a href="#">M39012/82B3001</a>

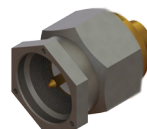
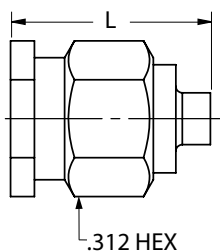
# SMA Series

## Male Cable Connector



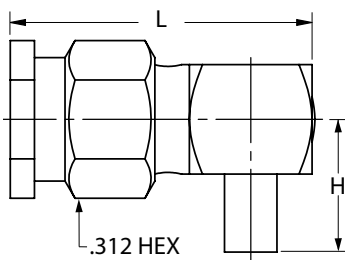
Cable	Part Number	L
0.047	<a href="#">SF2911-60172</a>	.499"
0.085	<a href="#">SF2906-6002</a>	.440"
0.085	<a href="#">M39012/79B3101</a>	.828"
0.141	<a href="#">SF2902-6001</a>	.330"
0.141	<a href="#">SF2902-6005</a>	.449"
0.141	<a href="#">M39012/79-3108</a>	.460"

## Male Cable Connector, Lockwire Holes



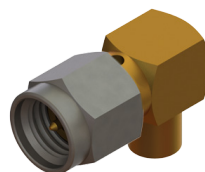
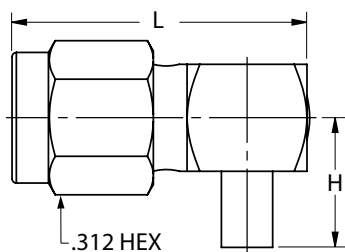
Cable	Part Number	L
0.085	<a href="#">M39012/79-3007</a>	.440"
0.085	<a href="#">M39012/79B3001</a>	.449"
0.141	<a href="#">M39012/79B3002</a>	.440"

## Male Cable Connector, Lockwire Holes, R/A



Cable	Part Number	L	H
0.085	<a href="#">M39012/80-3005</a>	.738"	.303"
0.141	<a href="#">M39012/80-3006</a>	.689"	.312"

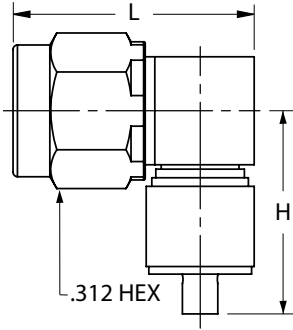
## Male Cable Connector, R/A



Cable	Part Number	L	H
0.085	<a href="#">SF2915-6001</a>	.682"	.312"
0.085	<a href="#">M39012/80B3101</a>	.689"	.310"
0.085	<a href="#">M39012/80-3107</a>	.738"	.625"
0.141	<a href="#">2912-6001</a>	.675"	.312"
0.141	<a href="#">SF2912-6001</a>	.675"	.312"
0.141	<a href="#">M39012/80-3108</a>	.738"	.625"

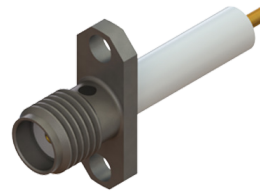
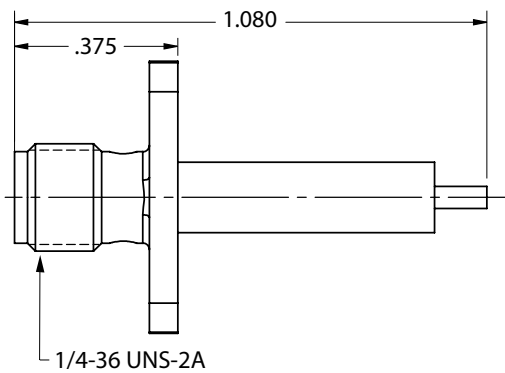
# SMA Series

## Male Cable Connector, Swept R/A



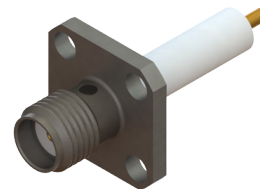
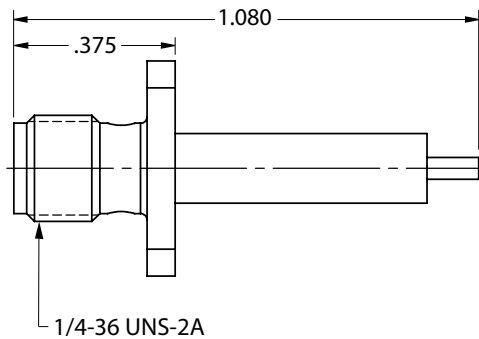
Cable	Part Number	L	H
0.047	<a href="#">SF2912-60955</a>	.552"	.470"
0.085	<a href="#">SF2915-6605</a>	.558"	.448"
0.141	<a href="#">SF2912-6605</a>	.552"	.448"

## Female Flange Mount Connector, 2 Hole (Candlestick)



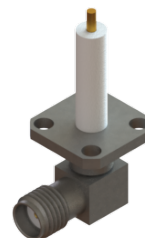
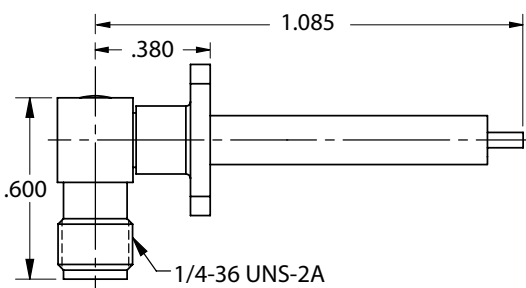
Part Number
<a href="#">SF2950-6200</a>

## Female Flange Mount Connector, 4 Hole (Candlestick)



Part Number
<a href="#">M83517/4-31005</a>
<a href="#">SF2950-6061</a>

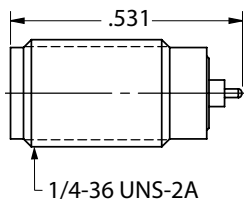
## Female Flange Mount Connector, 4 Hole (Candlestick), R/A



Part Number
<a href="#">SF2960-6025</a>

# SMA Series

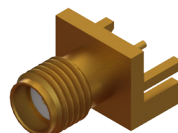
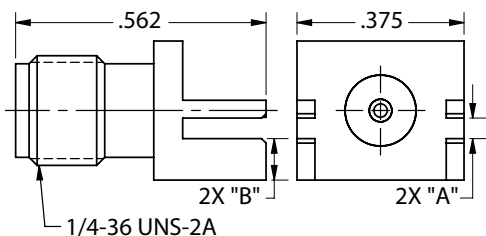
## Female Sparkplug Hermetic Connector, (.018" Pin)



### Part Number

2975-6200

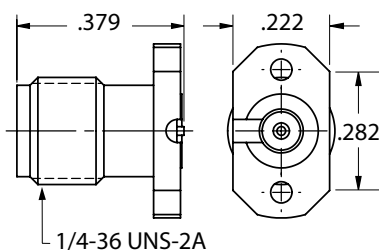
## Female PCB Edge Launch Connector



Part Number	A	B
<a href="#">2985-6035</a>	.068"	.073"
<a href="#">2985-6036</a>	.048"	.093"
<a href="#">2985-6037</a>	.037"	.104"
<a href="#">2985-6038</a>	.099"	.042"

*'-TD' suffix are pre-tinned*

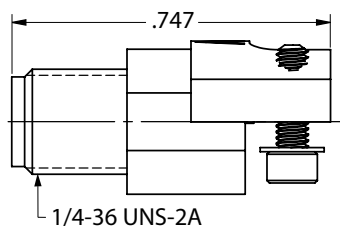
## Female PCB Solderless Compression Mount Connector, 2 Hole



Part Number	Decr.
<a href="#">SF2921-61345</a>	Microstrip
<a href="#">SF2921-61356</a>	Stripline

*'-1S' with 4.76mm and '-2S' with 6.35mm screws*

## Female PCB Solderless Edge Launch Connector, 2 Hole

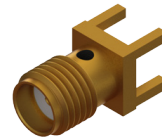
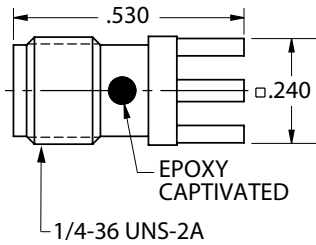


### Part Number

SF2921-61450

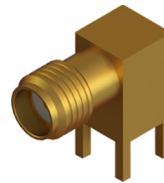
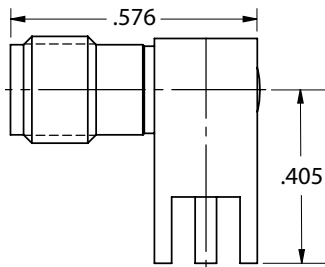
# SMA Series

## Female PCB Thru-Hole Connector



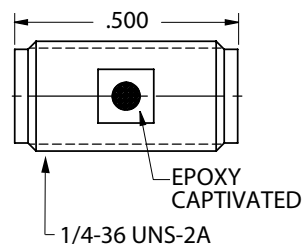
Part Number
<a href="#">2985-6004</a>
<i>‘TD’ suffix are pre-tinned</i>

## Female PCB Thru-Hole Connector, R/A



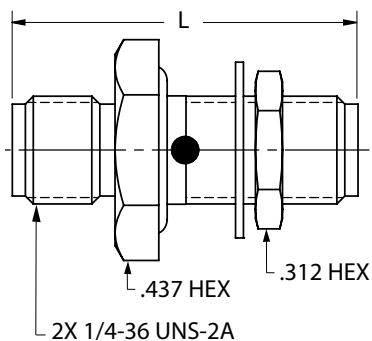
Part Number
<a href="#">2986-6001</a>
<i>‘TD’ suffix are pre-tinned</i>

## SMA Female to Female Adapter



Part Number
<a href="#">M55339/31-30001</a>
<a href="#">SF2992-6001</a>

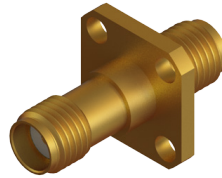
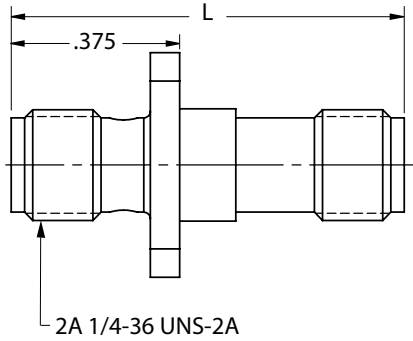
## SMA Female to Female Bulkhead Adapter



Part Number	L	Decr.
<a href="#">SF2990-6002</a>	.790"	
<a href="#">SF2990-6005</a>	.875"	
<a href="#">SF2991-6002</a>	.875"	Hermetic
<a href="#">M55339/28-30001</a>	.906"	Hermetic

# SMA Series

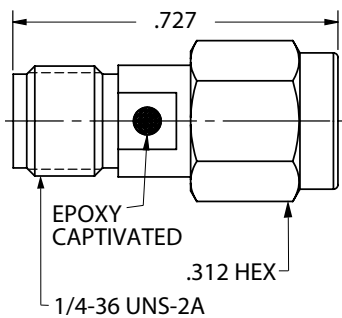
## SMA Female to Female Flange Mount Adapter, 4 Hole



Part Number	L
<a href="#">M55339/28-30002</a>	.725"
<a href="#">2991-6007</a>	.875"
<a href="#">SF2991-6007</a>	.875"

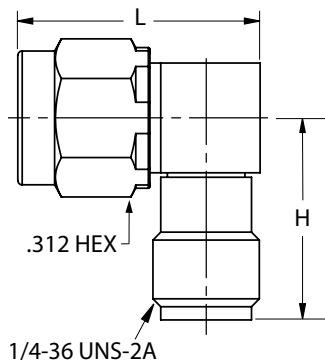
*'SF' denotes passivated stainless*

## SMA Female to Male Adapter



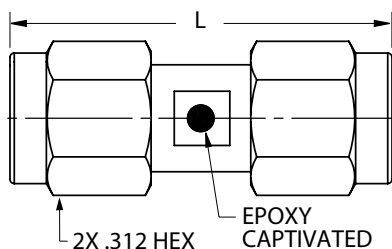
Part Number
<a href="#">SF2997-6003</a>

## SMA Female to Male Adapter, R/A



Part Number	L	H
<a href="#">M55339/02-30001</a>	.444"	.590"
<a href="#">2994-6602</a>	.552"	.585"
<a href="#">SF2994-6001</a>	.635"	.640"

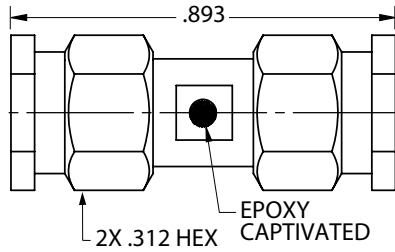
## SMA Male to Male Adapter



Part Number	L
<a href="#">2993-6001</a>	.875"
<a href="#">SF2993-6001</a>	.875"
<a href="#">M55339/29-30101</a>	.910"

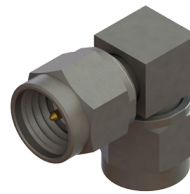
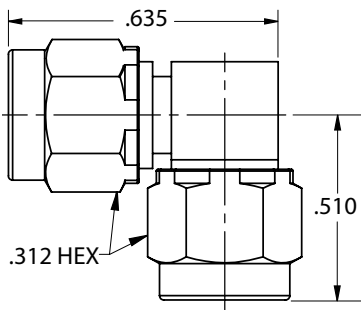
# SMA Series

## SMA Male to Male Adapter, Lockwire Holes



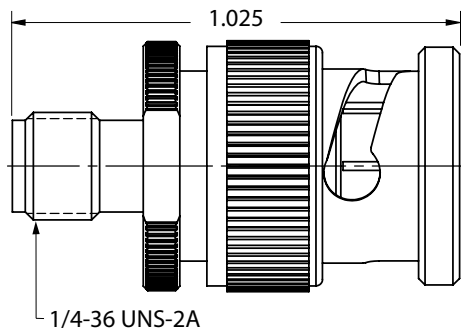
Part Number
M55339/29-30001

## SMA Male to Male Adapter, R/A



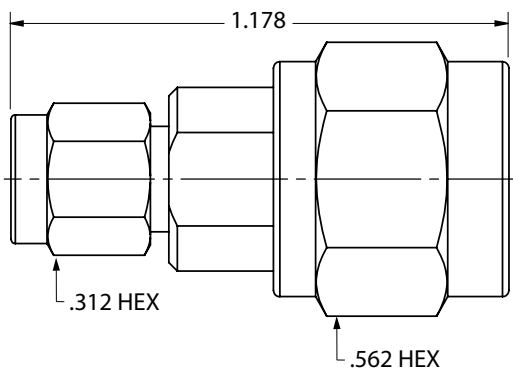
Part Number
M55339/53-30001

## SMA Female to BNC Male Adapter



Part Number
M55339/44-30001

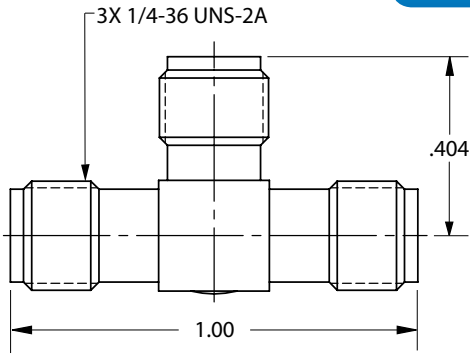
## SMA Male to PTNC Male Adapter



Part Number
SF1129-6157

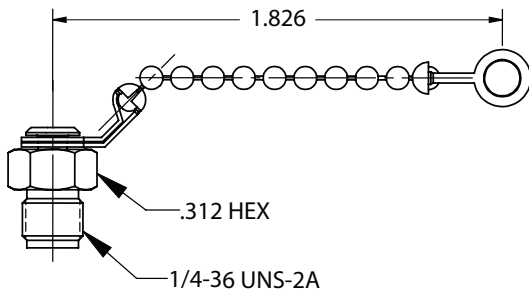
# SMA Series

## SMA Female to Female to Female Tee Adapter



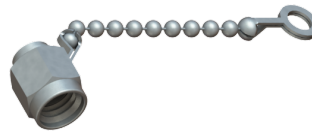
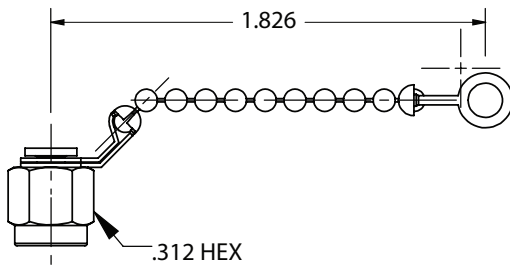
Part Number
M55339/30-30003

## Female Dust Cap



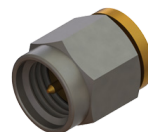
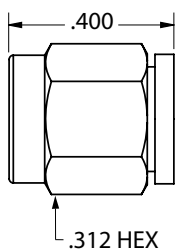
Part Number	Decr.
<a href="#">2921-61408</a>	No Chain
<a href="#">M39012/25-3026</a>	Bead Chain

## Male Dust Cap



Part Number	Decr.
<a href="#">M39012/25-3024</a>	Bead Chain
<a href="#">M39012/25-3025</a>	Link Chain
<a href="#">M39012/25-3124</a>	Rope Chain

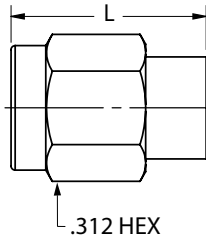
## Male Short



Part Number
SF8018-6007

# SMA Series

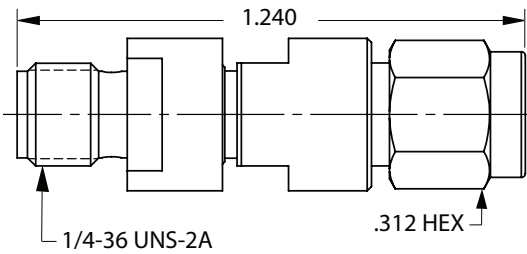
## Male Termination



Part Number	L	Decr.
<a href="#">8018-6061</a>	.330"	No Chain
<a href="#">SF8018-6061</a>	.330"	No Chain
<a href="#">8018-6172</a>	.500"	No Chain
<a href="#">8018-6005</a>	.520"	No Chain
<a href="#">SF8018-6005</a>	.520"	No Chain
<a href="#">8018-6174</a>	.600"	Bead Chain

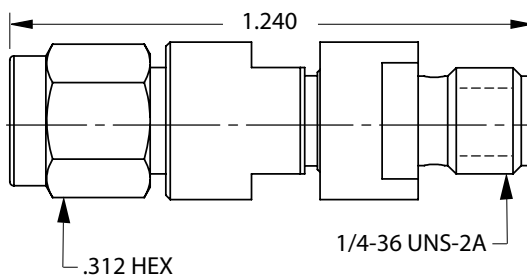
*'SF' denotes passivated stainless*

## SMA Female to Male Attenuator, 18 GHz



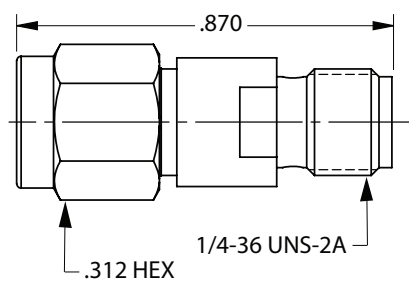
Part Number	Decr.
<a href="#">M3933/16-XXN</a>	Nonscreened
<a href="#">M3933/16-XXS</a>	Screened

## SMA Male to Female Attenuator, 12.4 GHz



Part Number	Decr.
<a href="#">M3933/14-XXN</a>	Nonscreened
<a href="#">M3933/14-XXS</a>	Screened

## SMA Male to Female Attenuator, 18 GHz



Part Number	Decr.
<a href="#">M3933/25-XXN</a>	Nonscreened
<a href="#">M3933/25-XXS</a>	Screened
<a href="#">SF0929-6200-XX</a>	
<a href="#">SF0930-6200-XX</a>	

# 2.92mm Series

## 2.92mm Interface at a Glance

The 2.92mm connector was developed for use to 40 GHz. The male pin is shorter than that of an SMA or 3.5mm to ensure that the outer contacts of the male and female connectors engage before the pin and female receptacle do. This ensures that the pin and socket will not see excessive wear and mating stress seen by misalignment in an SMA or 3.5mm connector. The 2.92mm connector also has a thicker wall than a standard SMA. The 2.92mm series mates with SMA and 3.5mm connectors.

### Electrical Specifications

Impedance	50Ω
Frequency	40 GHz
VSWR	1.03 + .005 f
Insertion Loss	.04 √ f
Shielding Effectiveness	≥ 100 dB

### Mechanical Specifications

Mating Cycles	500
Mating Torque	7 - 10 in - lbs
Inter-mate ability	SMA, 3.5mm

### Environmental Specifications

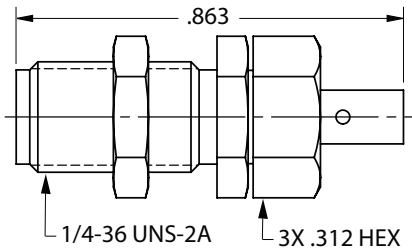
Temperature Rating	-65°C to +165°C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D, 20 Gs
Shock	MIL-STD-202, Method 213, Condition I, 100 Gs
Thermal Shock	MIL-STD-202, Method 107. Cond. B, -65°C to +125°C
Moisture Resistance	MIL-STD-202, Method 106, Less Step 7B
Barometric Pressure (Altitude)	MIL-STD-202, Method 105, Condition C, 70k Ft.

Note: Specifications, dimensions and images are typical for the series and may vary by part number

# 2.92mm Series

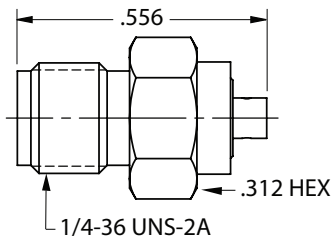
2.92mm Series

## Female Bulkhead Cable Connector



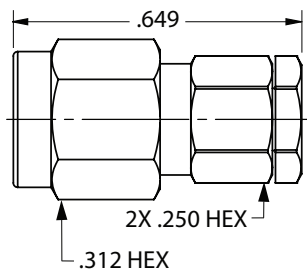
Cable	Part Number
0.085	<a href="#">SF1521-60025</a>

## Female Cable Connector



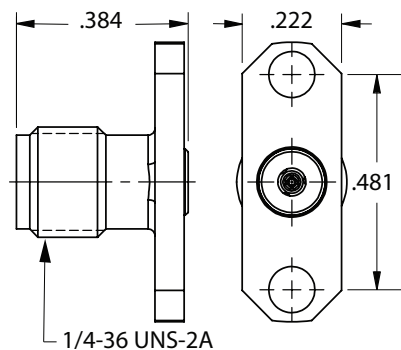
Cable	Part Number
0.047	<a href="#">SF1521-60039</a>
0.085	<a href="#">SF1521-60077</a>

## Male Cable Connector



Cable	Part Number
0.047	<a href="#">SF1511-60069</a>
0.085	<a href="#">SF1511-60071</a>
0.141	<a href="#">SF1511-60044</a>

## Female Flange Mount Connector, 2 Hole (Accepts Ø.012" Pin)

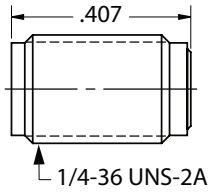


Part Number
<a href="#">SF1552-6002</a>

# 2.92mm Series

2.92mm Series

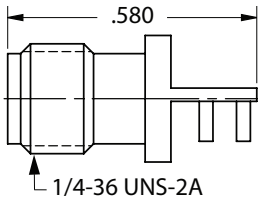
## Female Sparkplug Connector, Accepts Ø.012" Pin



Part Number

SF1575-6007

## Female Edge Launch Connector, 4 Leg

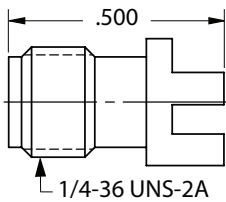


Part Number

1521-00002

*‘TD’ suffix are pre-tinned*

## Female PCB Edge Launch Connector, .062" PCB Thickness

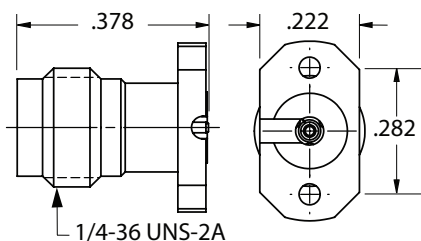


Part Number

1521-60051

*‘TD’ suffix are pre-tinned*

## Female PCB Solderless Compression Mount Connector, 2 Hole



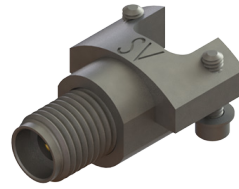
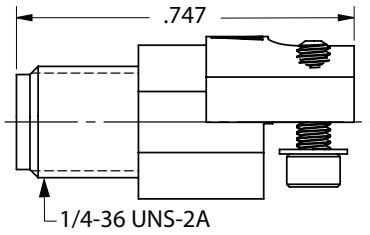
Part Number	Decr.
<a href="#">SF1521-60061</a>	Stripline
<a href="#">SF1521-60070</a>	Microstrip

*‘-1S’ with 4.76mm and ‘-2S’ with 6.35mm screws*

# 2.92mm Series

2.92mm Series

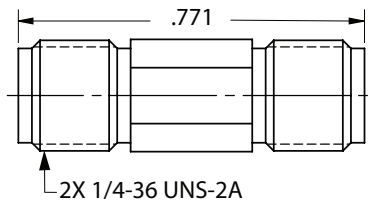
## Female PCB Solderless Edge Mount Connector, 2 Hole



Part Number

SF1521-6010Z

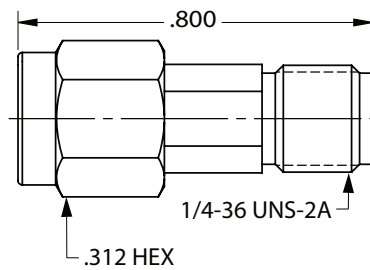
## 2.92mm Female to Female Adapter



Part Number

SF1590-6000

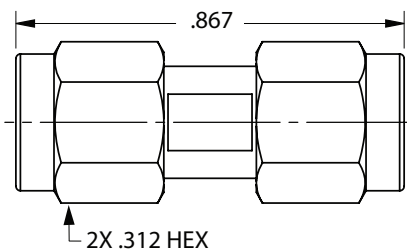
## 2.92mm Male to Female Adapter



Part Number

SF1597-6003

## 2.92mm Male to Male Adapter



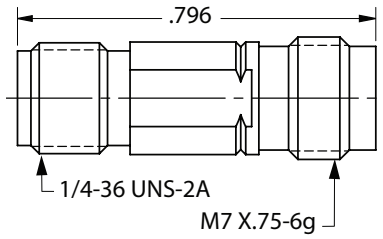
Part Number

SF1593-6000

# 2.92mm Series

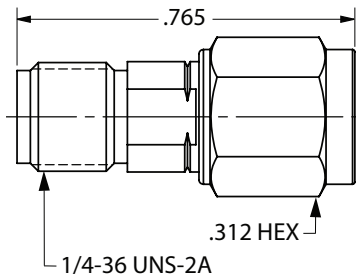
2.92mm Series

## 2.92mm Female to 2.4mm Female Adapter



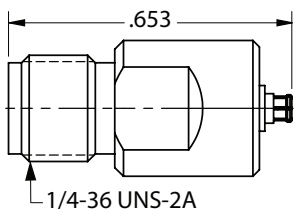
Part Number
SF1116-6004

## 2.92mm Female to 2.4mm Male Adapter



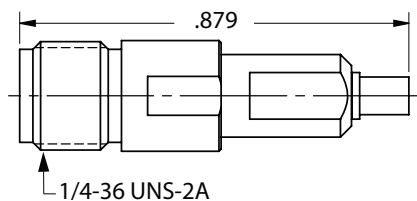
Part Number
SF1116-6002

## 2.92mm Female to SMPS Female Adapter



Part Number
1138-6009

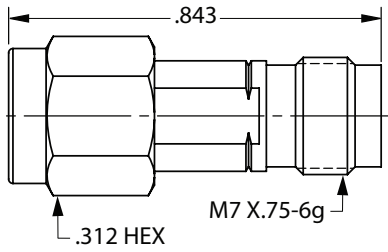
## 2.92mm Female to SMPS Male Adapter



Detent	Part Number
SB	SF1138-6024
FD	SF1138-6015

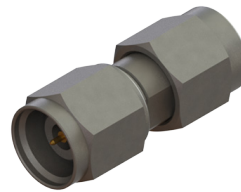
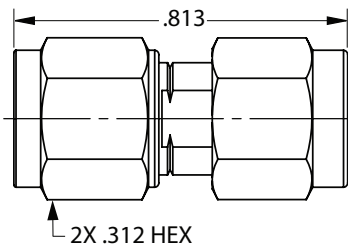
# 2.92mm Series

## 2.92mm Male to 2.4mm Female Adapter



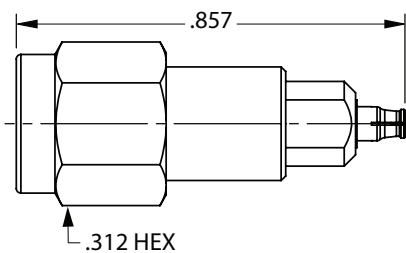
Part Number
SF1116-6003

## 2.92mm Male to 2.4mm Male Adapter



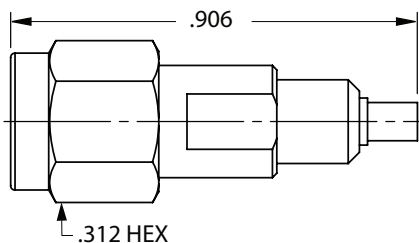
Part Number
SF1116-6007

## 2.92mm Male to SMPS Female Adapter



Part Number
SF1115-6091

## 2.92mm Male to SMPS Male Adapter

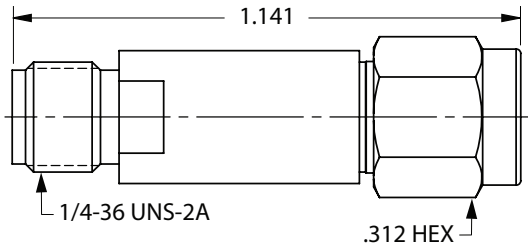


Detent	Part Number
SB	SF1115-6090
FD	SF1115-6089

# 2.92mm Series

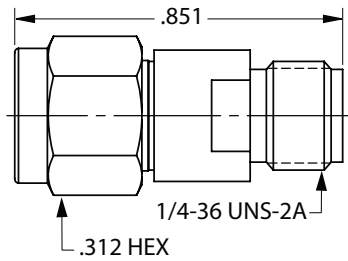
2.92mm Series

## 2.92mm Female to Male Attenuator, 32 GHz



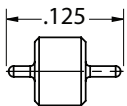
Part Number	Decr.
<a href="#">M3933/30-XXN</a>	Nonscreened
<a href="#">M3933/30-XXS</a>	Screened

## 2.92mm Male to Female Attenuator, 40 GHz



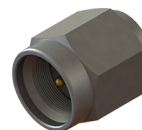
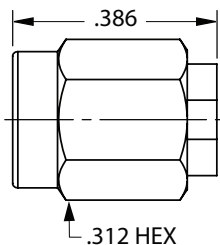
Part Number
<a href="#">SF0915-6200-XX</a>

## Feed-Thru Hermetic Seal, Accepts Ø.012" Pin



Part Number
<a href="#">066-15-000</a>

## Male Termination



Part Number
<a href="#">SF8015-6002</a>

## 2.4mm Interface at a Glance

The 2.4mm connector was developed for use to 50 GHz. This connector series uses a thick outer wall to eliminate the fragility seen in SMA and 2.92mm connectors. The female socket is also strengthened to ensure reliable mating. The 2.4mm series mates with SMA, 3.5mm and 2.92mm connectors with adapters and can mate with the 1.85mm series without adapters.

### Electrical Specifications

Impedance	50Ω
Frequency	50 GHz
VSWR	1.03 + .005 f
Insertion Loss	.04 √ f
Shielding Effectiveness	≥ 100 dB

### Mechanical Specifications

Mating Cycles	500
Recommended Torque	5 - 7 in - lbs
Inter-mate ability	1.85mm

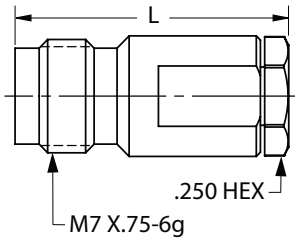
### Environmental Specifications

Temperature Rating	-65°C to +165°C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D, 20 Gs
Shock	MIL-STD-202, Method 213, Condition I, 100 Gs
Thermal Shock	MIL-STD-202, Method 107. Cond. B, -65°C to +125°C
Moisture Resistance	MIL-STD-202, Method 106, Less Step 7B
Barometric Pressure (Altitude)	MIL-STD-202, Method 105, Condition C, 70k Ft.

Note: Specifications, dimensions and images are typical for the series and may vary by part number

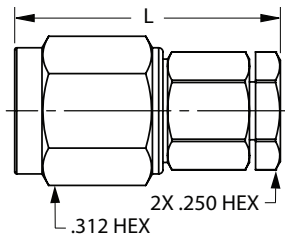
# 2.4mm Series

## Female Cable Connector



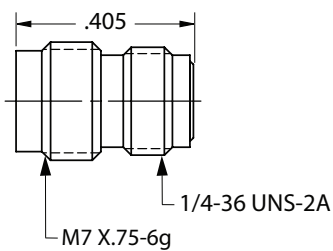
Cable	Part Number	L
0.047	<a href="#">SF1621-60014</a>	.671"
0.085	<a href="#">SF1621-60009</a>	.679"

## Male Cable Connector



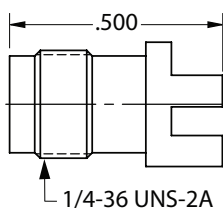
Cable	Part Number	L
0.047	<a href="#">SF1611-60001</a>	.633"
0.085	<a href="#">SF1611-60003</a>	.580"

## Female Sparkplug Connector, Accepts Ø.008" Pin



Part Number
<a href="#">SF1675-6004</a>

## Female PCB Edge Launch Connector, .062" PCB Thickness



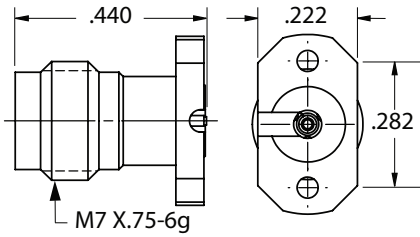
Part Number
<a href="#">1621-60008</a>

*\*TD' suffix are pre-tinned*

2.4mm Series

# 2.4mm Series

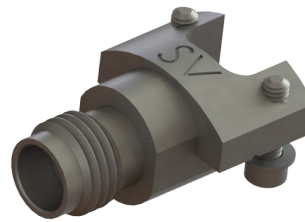
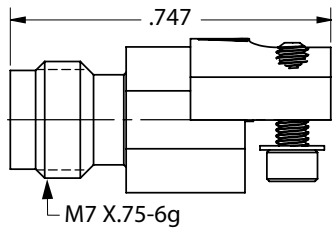
## Female PCB Solderless Compression Mount Connector, 2 Hole



Part Number	Descr.
<a href="#">SF1621-60026</a>	Microstrip
<a href="#">SF1621-60029</a>	Stripline

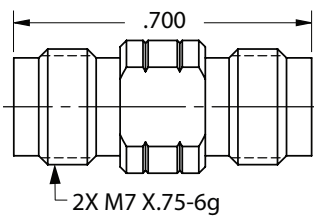
*'-1S' with 4.76mm and '-2S' with 6.35mm screws*

## Female PCB Solderless Edge Mount Connector, 2 Hole



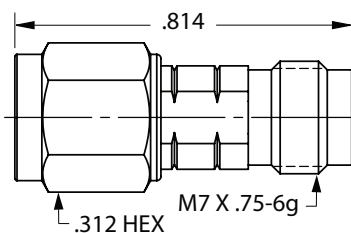
Part Number
<a href="#">SF1621-60036</a>

## 2.4mm Female to Female Adapter



Part Number
<a href="#">SF1116-6053</a>

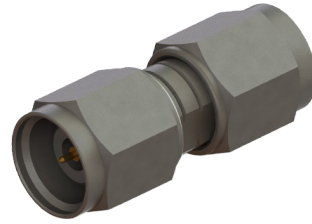
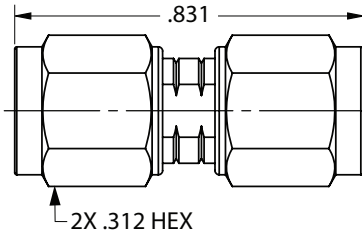
## 2.4mm Male to Female Adapter



Part Number
<a href="#">SF1116-6040</a>

# 2.4mm Series

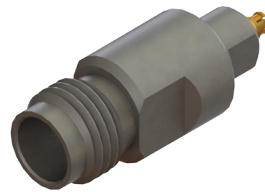
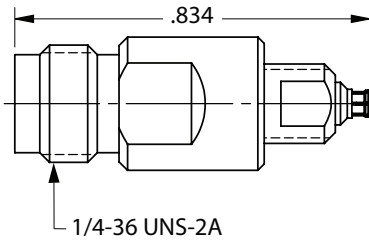
## 2.4mm Male to Male Adapter



Part Number

SF1116-6039

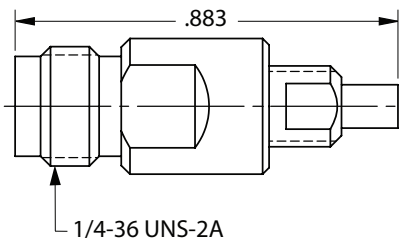
## 2.4mm Female to SMPS Female Adapter



Part Number

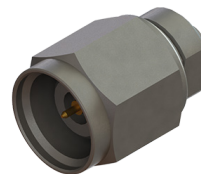
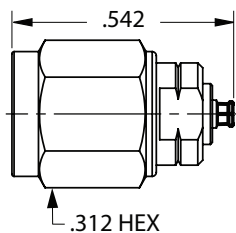
SF1116-6022

## 2.4mm Female to SMPS Male Adapter



Detent	Part Number
SB	SF1116-6066
FD	SF1116-6021

## 2.4mm Male to SMPS Female Adapter



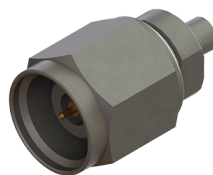
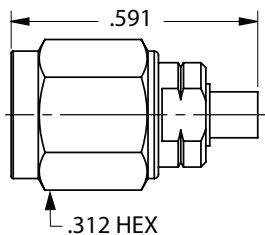
Part Number

SF1116-6025

2.4mm Series

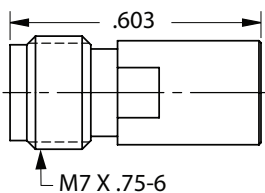
# 2.4mm Series

## 2.4mm Male to SMPS Male Adapter



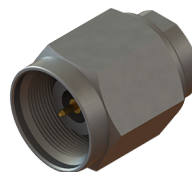
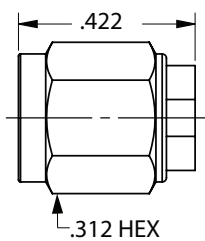
Detent	Part Number
SB	<a href="#">SF1116-6023</a>
FD	<a href="#">SF1116-6024</a>

## Female Termination



Part Number
<a href="#">SF8016-6402</a>

## Male Termination



Part Number
<a href="#">SF8016-6404</a>

2.4mm Series

# 1.85mm Series

## 1.85mm Interface at a Glance

The 1.85mm connector was designed for mode free operation through 65 GHz. The interface uses a mostly air-dielectric with a support bead that is set back in the body of the connector to reduce bead interaction in a mated pair. Like the 2.92mm and 2.4mm connector, the body has been designed to ensure that the outer conductors engage before the center conductors make contact. The 1.85mm interface uses an M7 thread and is compatible only with the 2.4mm interface. SV Microwave supplies adapters to mate 1.85mm connectors to SMA and 2.92mm connectors.

### Electrical Specifications

Impedance	50Ω
Frequency	65 GHz
VSWR	1.03 + .005 f
Insertion Loss	.04 √ f
Shielding Effectiveness	≥ 100 dB

### Mechanical Specifications

Mating Cycles	500
Mating Torque	5 - 7 in - lbs
Inter-mate ability	2.4mm

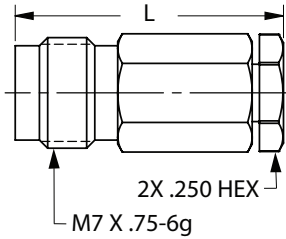
### Environmental Specifications

Temperature Rating	-65°C to +165°C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D, 20 Gs
Shock	MIL-STD-202, Method 213, Condition I, 100 Gs
Thermal Shock	MIL-STD-202, Method 107. Cond. B, -65°C to +125°C
Moisture Resistance	MIL-STD-202, Method 106, Less Step 7B
Barometric Pressure (Altitude)	MIL-STD-202, Method 105, Condition C, 70k Ft.

Note: Specifications, dimensions and images are typical for the series and may vary by part number

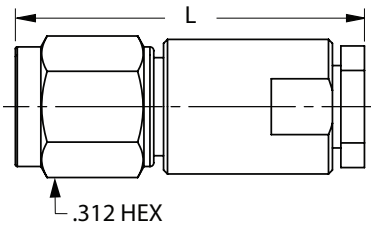
# 1.85mm Series

## Female Cable Connector



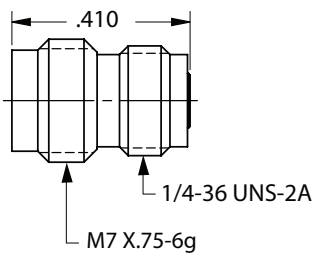
Cable	Part Number	L
0.047	<a href="#">SF3321-60005</a>	.665"
0.085	<a href="#">SF3321-60006</a>	.945"

## Male Cable Connector



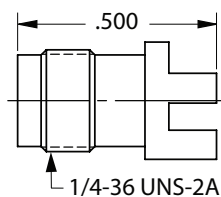
Cable	Part Number	L
0.047	<a href="#">SF3311-60002</a>	.890"
0.085	<a href="#">SF3311-60003</a>	.581"

## Female Sparkplug Connector, Accepts Ø.008" Pin



Part Number
<a href="#">SF3375-6001</a>

## Female PCB Edge Launch Connector, .062" PCB Thickness

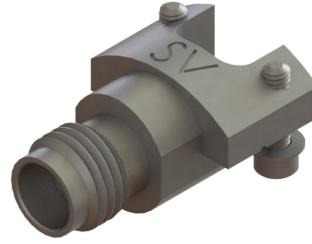
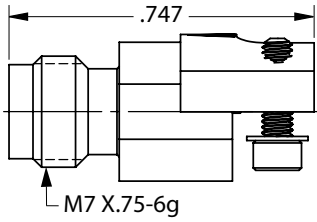


Part Number
<a href="#">3321-60001</a>

<sup>1</sup>'TD' suffix are pre-tinned

# 1.85mm Series

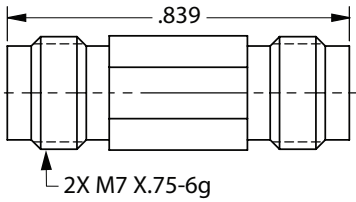
## Female PCB Solderless Edge Mount Connector, 2 Hole



Part Number

SF3321-60021

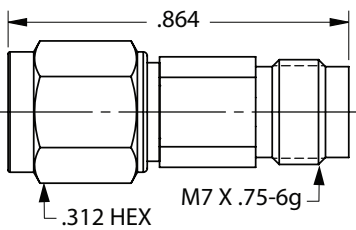
## 1.85mm Female to Female Adapter



Part Number

SF1133-6008

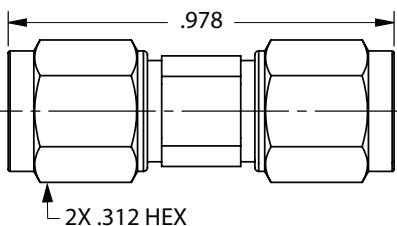
## 1.85mm Male to Female Adapter



Part Number

SF1133-6010

## 1.85mm Male to Male Adapter



Part Number

SF1133-6009

## SMP Interface at a Glance

SV Microwave offers a complete line of SMP connectors that conform to DSCC 94007, 94008 and MIL-STD-348. The SMP connector was developed to meet an industry need for a smaller high frequency compact design that incorporated ease of use and functionality. The SMP bullet is the heart of this unique design.

### Electrical Specifications

Impedance	50Ω
Frequency	40 GHz
VSWR	1.15:1 to 26.5 GHz typ.; 1.5:1 to 40 GHz typ.
Insertion Loss	.06 √ f
Shielding Effectiveness	≥ -80 dB DC - 3 GHz; ≥ -65 dB 3 - 26.5 GHz
Dielectric Withstanding Voltage	500 VRMS

### Mechanical Specifications

	SB	LD	FD
Mating Cycles	1000	500	100
Force to Engage/Disengage	3.0 / 0.5 lbs	5.0 / 7.0 lbs	7.0 / 9.0 lbs
Axial Misalignment	.010"		
Radial Misalignment	± .010"		

### Environmental Specifications

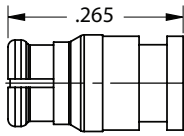
Temperature Rating	-65°C to +165°C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D, 20 Gs
Shock	MIL-STD-202, Method 213, Condition I, 100 Gs
Thermal Shock	MIL-STD-202, Method 107. Cond. B, -65°C to +165°C
Barometric Pressure (Altitude)	MIL-STD-202, Method 105, Condition C, 70k Ft.

Note: Specifications, dimensions and images are typical for the series and may vary by part number

# SMP Series

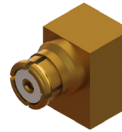
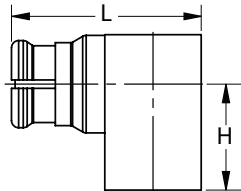
SMP Series

## Female Cable Connector



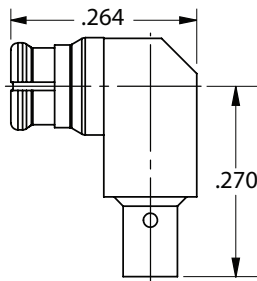
Cable	Part Number
0.047	<a href="#">1221-4010</a>
0.085	<a href="#">1221-4009</a>

## Female Cable Connector, R/A



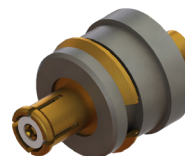
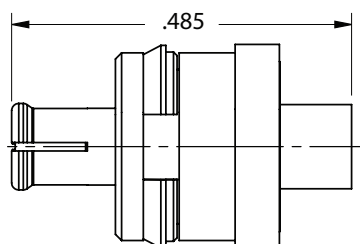
Cable	Part Number	L	H
0.047	<a href="#">1222-4012</a>	.263"	.188"
0.047	<a href="#">1213-4007</a>	.265"	.220"
0.085	<a href="#">1222-4011</a>	.265"	.188"
0.085	<a href="#">1214-4001</a>	.275"	.245"

## Female Cable Connector, Swept R/A



Cable	Part Number
0.047	<a href="#">1222-4004</a>
0.085	<a href="#">1222-4005</a>

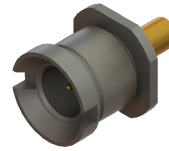
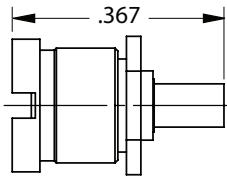
## Female Snap-In Cable Connector



Cable	Part Number
0.047	<a href="#">1221-6001</a>
0.085	<a href="#">1204-6000</a>

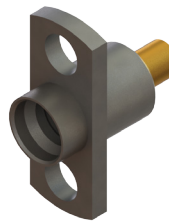
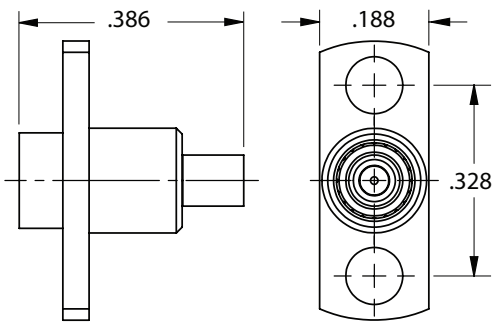
# SMP Series

## Male Bulkhead Cable Connector



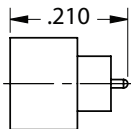
Detent	Cable	Part Number
LD	0.047	<a href="#">SF1211-6059</a>
FD	0.047	<a href="#">SF1211-6058</a>
CM	0.047	<a href="#">SF1211-6060</a>
LD	0.085	<a href="#">SF1211-6062</a>
FD	0.085	<a href="#">SF1211-6061</a>
CM	0.085	<a href="#">SF1211-6063</a>

## Male Flange Mount Cable Connector, 2 Hole



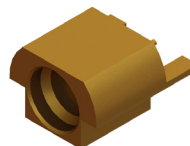
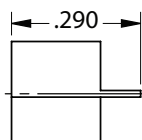
Detent	Cable	Part Number
SB	0.047	<a href="#">SF1211-6022</a>
LD	0.047	<a href="#">SF1211-6021</a>
FD	0.047	<a href="#">SF1233-6000</a>
SB	0.085	<a href="#">SF1211-6023</a>
LD	0.085	<a href="#">SF1211-6024</a>
FD	0.085	<a href="#">SF1211-6025</a>

## Male Solder-In Hermetic Connector, (.015" Pin)



Detent	Part Number
SB	<a href="#">1211-6043</a>
LD	<a href="#">1211-6042</a>
FD	<a href="#">1211-6041</a>

## Male PCB Edge Launch Connector



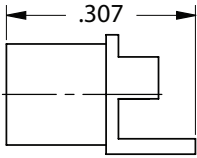
Detent	Part Number
SB	<a href="#">1211-66139</a>
LD	<a href="#">1211-66138</a>
FD	<a href="#">1211-66137</a>
CM	<a href="#">1211-66175</a>

<sup>1</sup>-'TD' suffix are pre-tinned

# SMP Series

SMP Series

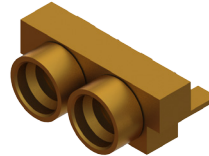
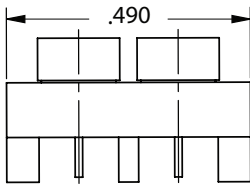
## Male PCB Edge Launch Connector, .062" PCB Thickness



Detent	Part Number
SB	<a href="#">1285-6004</a>
LD	<a href="#">1285-6003</a>
FD	<a href="#">1285-6002</a>

*'TD' suffix are pre-tinned*

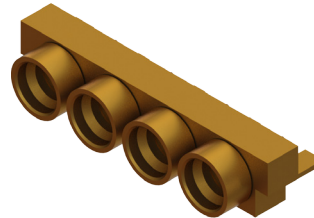
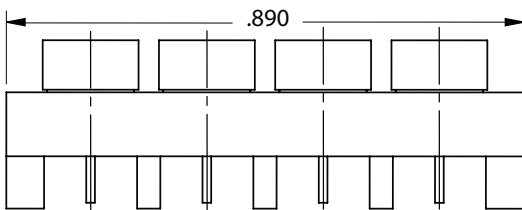
## Male PCB Edge Launch Connector, 2 Port



Detent	Part Number
SB	<a href="#">9311-60033</a>
LD	<a href="#">9311-60034</a>
FD	<a href="#">9311-60035</a>

*'TD' suffix are pre-tinned*

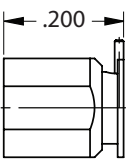
## Male PCB Edge Launch Connector, 4 Port



Detent	Part Number
SB	<a href="#">9311-60036</a>
LD	<a href="#">9311-60037</a>
FD	<a href="#">9311-60038</a>

*'TD' suffix are pre-tinned*

## Male PCB Surface Mount Connector, R/A

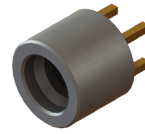
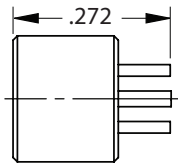


Detent	Part Number
SB	<a href="#">1211-40001</a>
LD	<a href="#">1211-40004</a>
FD	<a href="#">1211-40003</a>

*'TD' suffix are pre-tinned*

# SMP Series

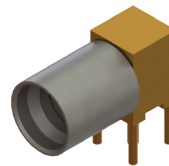
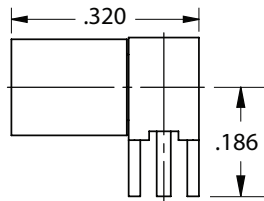
## Male PCB Thru-Hole Connector



Detent	Part Number
SB	<a href="#">SF1211-6045</a>
LD	<a href="#">SF1211-6044</a>
FD	<a href="#">SF1287-6001</a>

*\*-TD' suffix are pre-tinned*

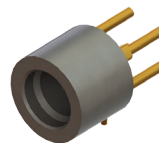
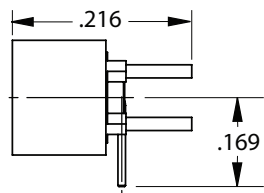
## Male PCB Thru-Hole Connector, R/A



Detent	Part Number
SB	<a href="#">SF1212-6002</a>
LD	<a href="#">SF1212-6001</a>
FD	<a href="#">SF1212-6000</a>

*\*-TD' suffix are pre-tinned*

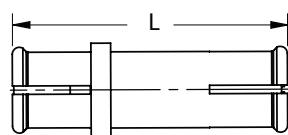
## Male PCB Thru-Hole Connector, R/A Contact



Detent	Part Number
SB	<a href="#">SF1211-66303</a>
LD	<a href="#">SF1211-66198</a>
FD	<a href="#">SF1211-66199</a>

*\*-TD' suffix are pre-tinned*

## SMP Female to Female Adapter

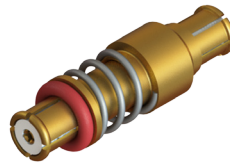
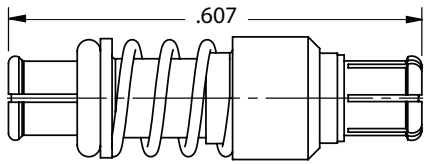


Part Number	L
<a href="#">1290-4008</a>	.255"
<a href="#">1290-4009</a>	.395"
<a href="#">1290-4007</a>	.769"

# SMP Series

SMP Series

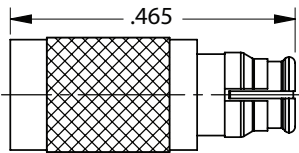
## SMP Female to Female Adapter, Spring Loaded



Part Number

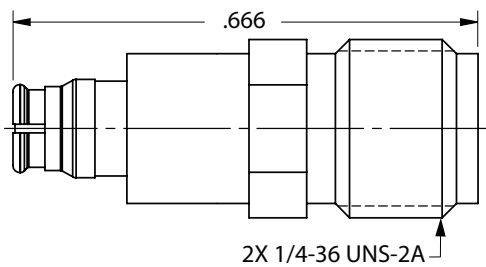
[1112-4019](#)

## SMP Male to Female Adapter



Detent	Part Number
SB	<a href="#">1112-4012</a>
LD	<a href="#">1112-4011</a>
FD	<a href="#">1112-4009</a>

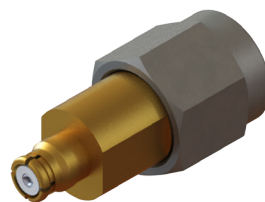
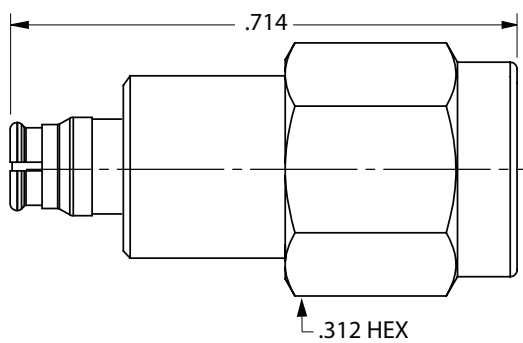
## SMP Female to 2.92mm Female Adapter



Part Number

[1115-6083](#)

## SMP Female to 2.92mm Male Adapter

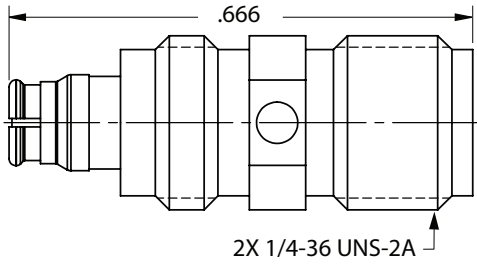


Part Number

[SF1115-6082](#)

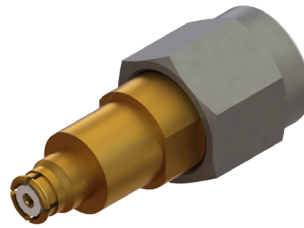
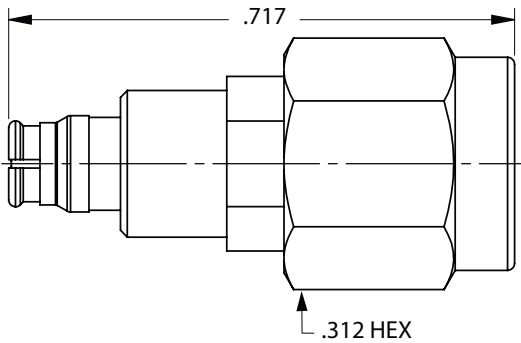
# SMP Series

## SMP Female to SMA Female Adapter



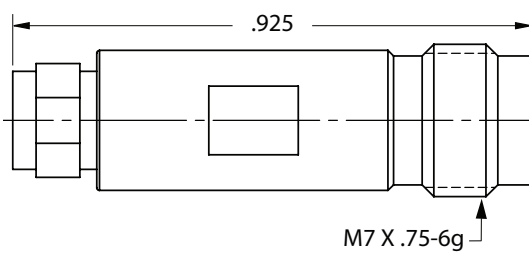
Part Number
<a href="#">1112-4018</a>

## SMP Female to SMA Male Adapter



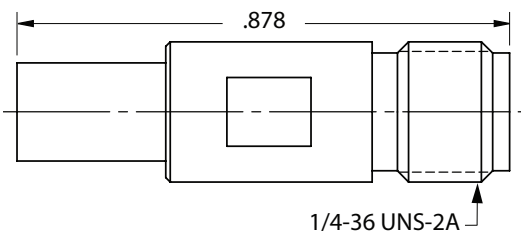
Part Number
<a href="#">SF1129-6154</a>

## SMP Male to 2.4mm Female Adapter



Detent	Part Number
SB	<a href="#">SF1116-6016</a>
LD	<a href="#">SF1116-6048</a>
FD	<a href="#">1116-6014</a>

## SMP Male to 2.92mm Female Adapter

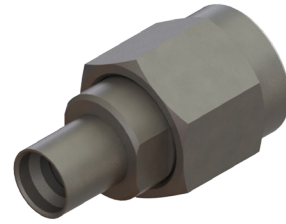
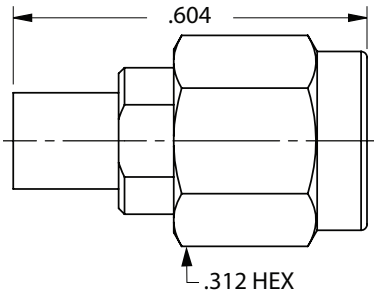


Detent	Part Number
SB	<a href="#">SF1112-6031</a>
LD	<a href="#">SF1112-6025</a>
FD	<a href="#">SF1112-6122</a>

# SMP Series

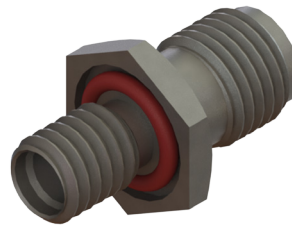
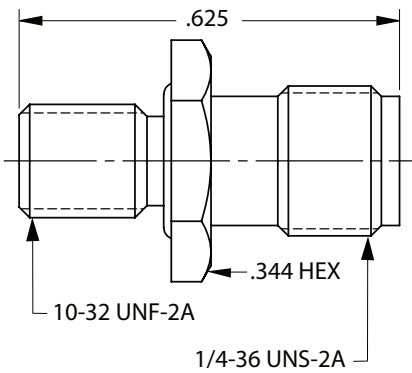
SMP Series

## SMP Male to 2.92mm Male Adapter



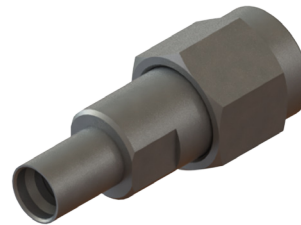
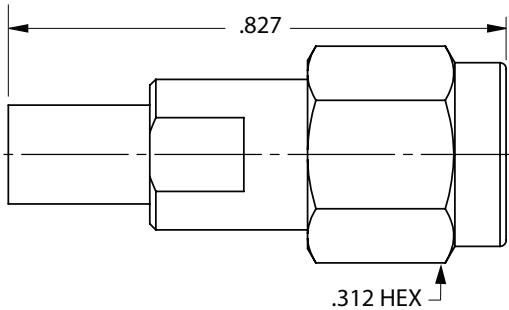
Detent	Part Number
SB	<a href="#">SF1115-6080</a>
FD	<a href="#">SF1115-6081</a>

## SMP Male to SMA Female Panel Mount Adapter



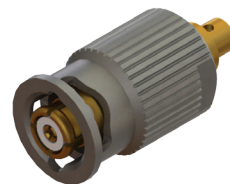
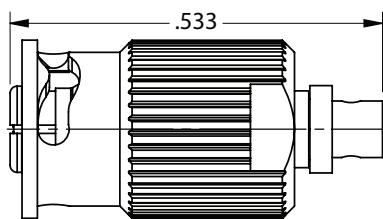
Detent	Part Number
SB	<a href="#">SF1112-6036</a>
LD	<a href="#">SF1112-6034</a>
FD	<a href="#">SF1112-6035</a>

## SMP Male to SMA Male Adapter



Detent	Part Number
FD	<a href="#">SF1129-6153</a>

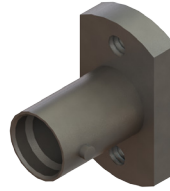
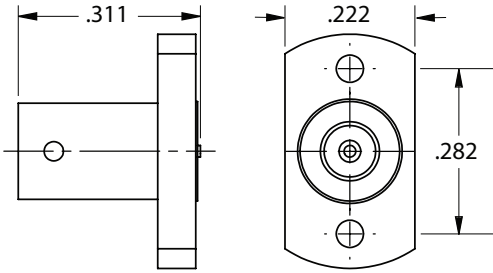
## Female QB<sup>®</sup> Cable Connector



Cable	Part Number
0.047	<a href="#">1221-40051</a>
0.085	<a href="#">1221-40049</a>
0.141	<a href="#">1221-40050</a>

# SMP Series

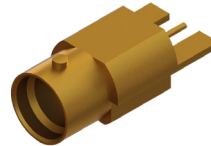
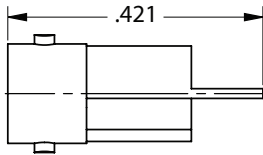
## Male PCB QB Compression Mount Connector, 2 Hole



Part Number	Descr.
SF1211-66214	Stripline

*'-1S' with 4.76mm and '-2S' with 6.35mm screws*

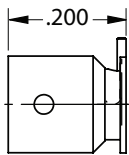
## Male PCB QB® Edge Launch Connector



Part Number
1211-66195

*'-TD' suffix are pre-tinned*

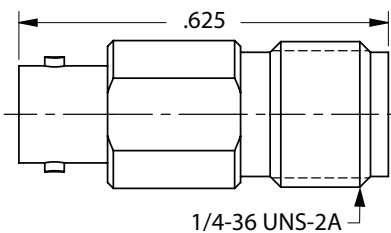
## Male PCB QB® Surface Mount Connector



Part Number
1211-40032

*'-TD' suffix are pre-tinned*

## SMP Male QB to 2.92mm Female Adapter

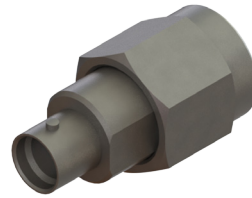
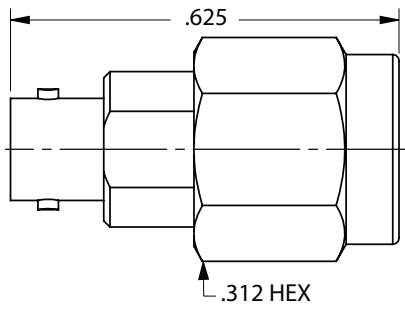


Part Number
SF1112-6144

# SMP Series

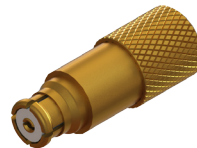
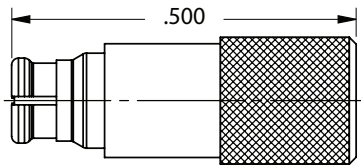
SMP Series

## SMP Male QB to SMA Male Adapter



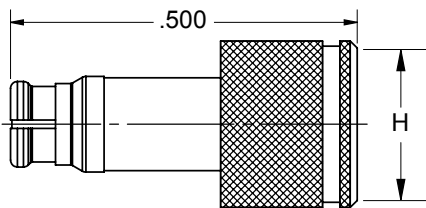
Part Number
<a href="#">1112-6114</a>

## Female Short



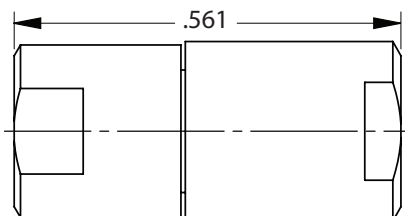
Part Number
<a href="#">8012-4008</a>

## Female Termination



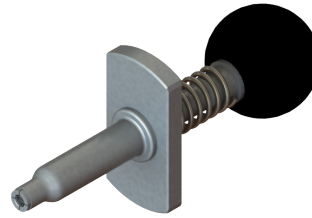
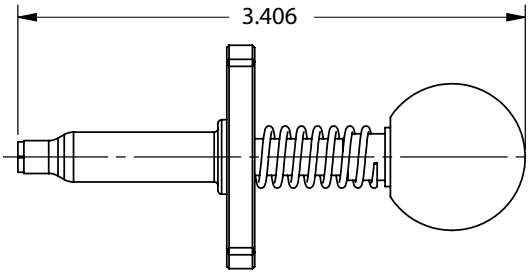
Part Number	H
<a href="#">8012-4006</a>	.187"
<a href="#">8012-4013</a>	.245"

## Male Termination



Detent	Part Number
SB	<a href="#">SF8012-6102</a>
LD	<a href="#">SF8012-6101</a>
FD	<a href="#">SF8012-6009</a>
CM	<a href="#">SF8012-6103</a>

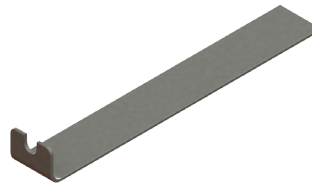
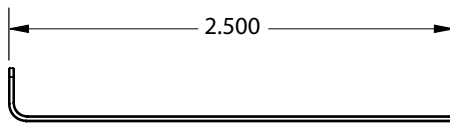
## Female Bullet Removal Tool



Part Number

500-12-000

## Female Cable Removal Tool



Part Number

500-12-019

# SMPM Series

## SMPM Interface at a Glance

SV Microwave offers a complete line of SMPM connectors. The SMPM connector was developed to improve on the application density and operating frequency range of the SMP connector. The SMPM connector is widely used in high density, high performance applications today.

### Electrical Specifications

Impedance	50Ω
Frequency	65 GHz
VSWR	1.10:1 to 26.5 GHz typ.; 1.30:1 to 50 GHz typ.
Insertion Loss	.07 √ f
Shielding Effectiveness	≥ -80 dB typ.
Dielectric Withstanding Voltage	325 VRMS

### Mechanical Specifications

	SB	FD
Mating Cycles	500	100
Force to Engage/Disengage	2.5 / 1.5 lbs	4.5 / 6.5 lbs
Axial Misalignment		.010"
Radial Misalignment		± .010"

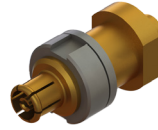
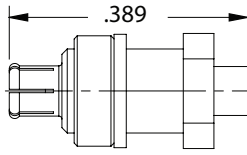
### Environmental Specifications

Temperature Rating	-65°C to +165°C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D, 20 Gs
Shock	MIL-STD-202, Method 213, Condition I, 100 Gs
Thermal Shock	MIL-STD-202, Method 107. Cond. B, -65°C to +165°C
Barometric Pressure (Altitude)	MIL-STD-202, Method 105, Condition C, 70k Ft.

Note: Specifications, dimensions and images are typical for the series and may vary by part number

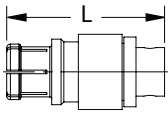
# SMPM Series

## Female Bulkhead Cable Connector



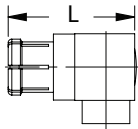
Cable	Part Number
0.047	<a href="#">3221-40011</a>
0.085	<a href="#">3221-4000</a>

## Female Cable Connector



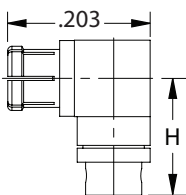
Cable	Part Number	L
0.047	<a href="#">3221-40007</a>	.260"
0.085	<a href="#">3221-40006</a>	.285"

## Female Cable Connector, R/A



Cable	Part Number	L
0.047	<a href="#">3269-4001</a>	.207"
0.085	<a href="#">3222-40002</a>	.274"

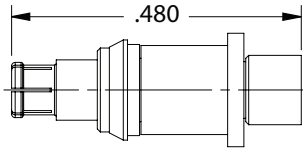
## Female Cable Connector, Swept R/A



Cable	Part Number	H
0.047	<a href="#">3222-40006</a>	.221"
0.085	<a href="#">3222-40005</a>	.316"

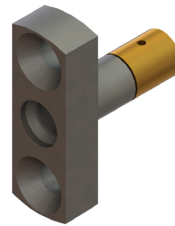
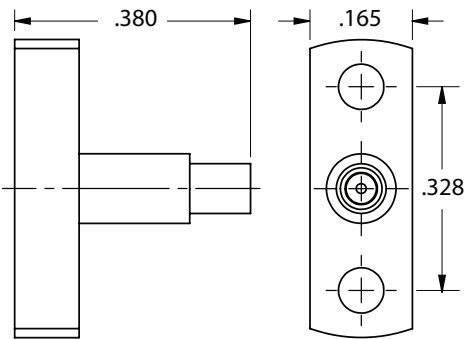
# SMPM Series

## Female Snap-In Cable Connector



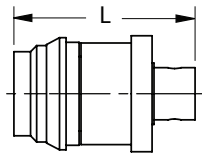
Cable	Part Number
0.085	<a href="#">3221-40010</a>

## Male Flange Mount Cable Connector, 2 Hole



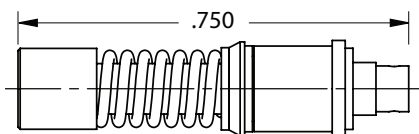
Detent	Cable	Part Number
SB	0.047	<a href="#">SF3211-60024</a>
FD	0.047	<a href="#">SF3211-60025</a>
SB	0.085	<a href="#">SF3211-6000</a>
FD	0.085	<a href="#">SF3211-60013</a>

## Male Snap-In Cable Connector



Detent	Cable	Part Number	L
SB	0.047	<a href="#">3211-40003</a>	.278"
FD	0.047	<a href="#">3202-6000</a>	.278"
SB	0.085	<a href="#">3211-40005</a>	.302"
FD	0.085	<a href="#">3211-40004</a>	.302"

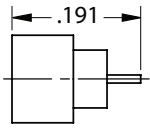
## Male Snap-In Float Mount Cable Connector



Cable	Part Number
0.047	<a href="#">SF3202-6001</a>

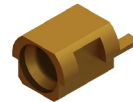
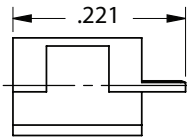
# SMPM Series

## Male Solder-In Hermetic Connector, (.012" Pin)



Detent	Part Number
SB	<a href="#">3211-60028</a>
FD	<a href="#">3211-60027</a>

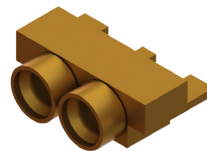
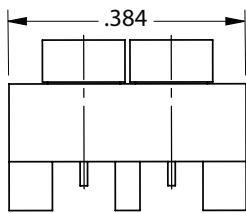
## Male PCB Edge Launch Connector



Detent	Part Number
SB	<a href="#">3211-60035</a>
FD	<a href="#">3285-6001</a>

<sup>1</sup>'TD' suffix are pre-tinned

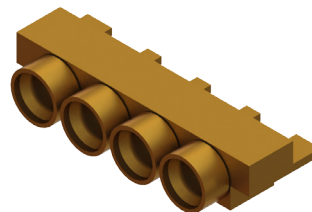
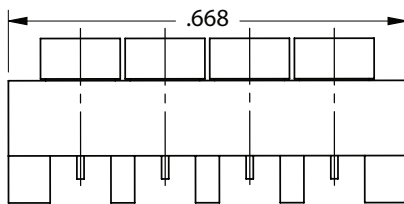
## Male PCB Edge Launch Connector, 2 Port



Detent	Part Number
SB	<a href="#">3211-60086</a>
FD	<a href="#">3211-60087</a>

<sup>1</sup>'TD' suffix are pre-tinned

## Male PCB Edge Launch Connector, 4 Port

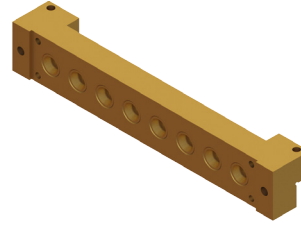
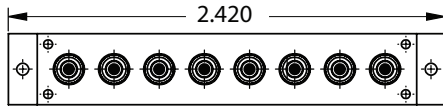


Detent	Part Number
SB	<a href="#">9311-60015</a>
FD	<a href="#">9311-60039</a>

<sup>1</sup>'TD' suffix are pre-tinned

# SMPM Series

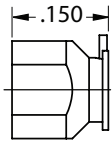
## Male PCB Edge Launch Connector, 8 Port



Detent	Part Number
FD	<a href="#">3211-60181</a>
CM	<a href="#">3211-60180</a>

*'TD' suffix are pre-tinned*

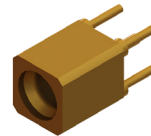
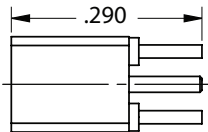
## Male PCB Surface Mount Connector, R/A



Detent	Part Number
SB	<a href="#">3287-6101</a>
FD	<a href="#">3287-6100</a>

*'TD' suffix are pre-tinned*

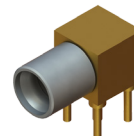
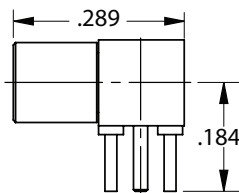
## Male PCB Thru-Hole Connector



Detent	Part Number
SB	<a href="#">3287-4101</a>
FD	<a href="#">3287-4100</a>

*'TD' suffix are pre-tinned*

## Male PCB Thru-Hole Connector, R/A

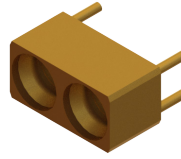
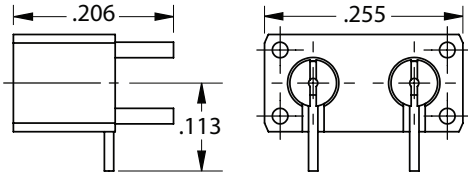


Detent	Part Number
SB	<a href="#">3212-40003</a>
FD	<a href="#">3212-40002</a>

*'TD' suffix are pre-tinned*

# SMPM Series

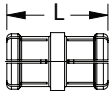
## Male PCB Thru-Hole Connector, R/A, 2 Port



Detent	Part Number
FD	3211-40024

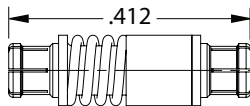
*'TD' suffix are pre-tinned*

## SMPM Female to Female Adapter



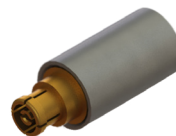
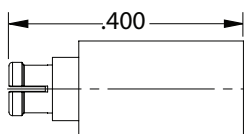
Part Number	L
<a href="#">1132-4010</a>	.166"
<a href="#">1132-4021</a>	.180"
<a href="#">3290-4002</a>	.211"
<a href="#">3290-4003</a>	.327"

## SMPM Female to Female Adapter, Spring Loaded



Part Number
<a href="#">1132-4006</a>

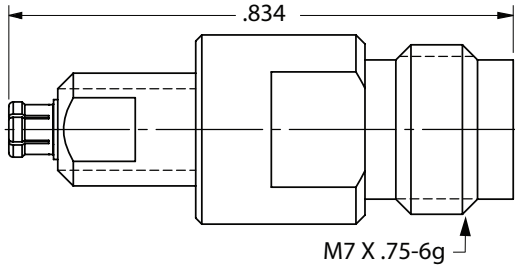
## SMPM Male to Female Adapter



Detent	Part Number
SB	<a href="#">1132-4005</a>

# SMPM Series

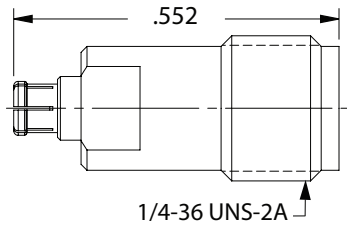
## SMPM Female to 1.85mm Female Adapter



Part Number

SF1133-6007

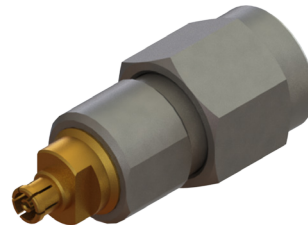
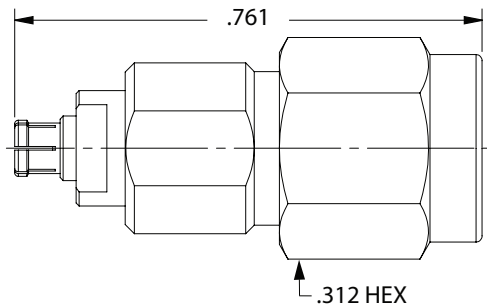
## SMPM Female to 2.92mm Female Adapter



Part Number

1115-6088

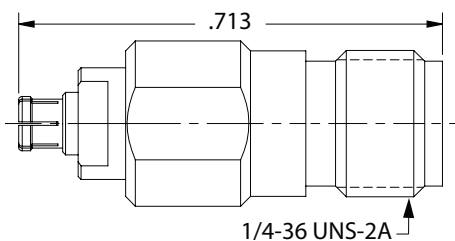
## SMPM Female to 2.92mm Male Adapter



Part Number

SF1115-6085

## SMPM Female to SMA Female Thread-In Adapter

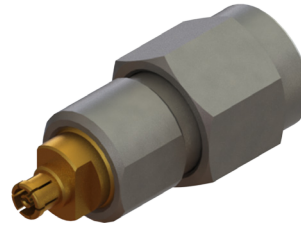
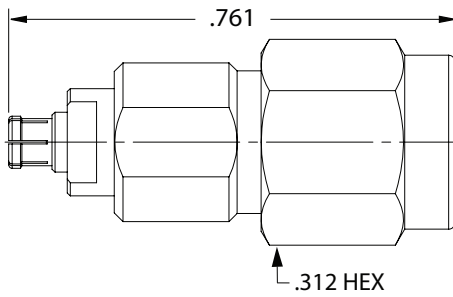


Part Number

1132-6025

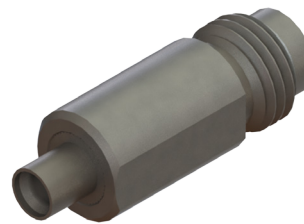
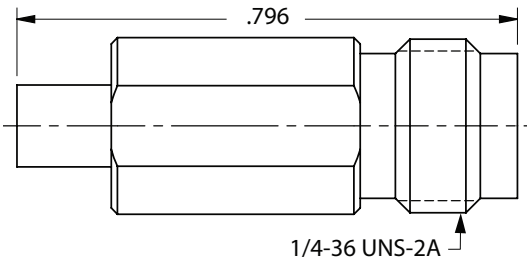
# SMPM Series

## SMPM Female to SMA Male Thread-In Adapter



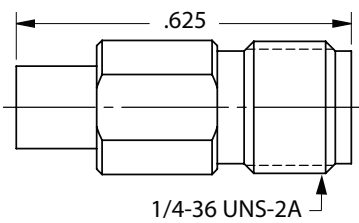
Part Number
1132-4003

## SMPM Male to 1.85mm Female Adapter



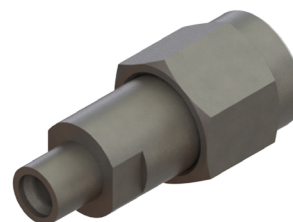
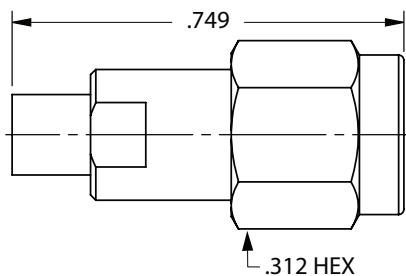
Detent	Part Number
SB	<a href="#">SF1132-6070</a>
FD	<a href="#">SF1132-6069</a>

## SMPM Male to 2.92mm Female Adapter



Detent	Part Number
FD	<a href="#">SF1115-6084</a>

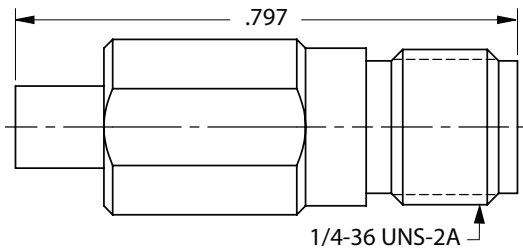
## SMPM Male to 2.92mm Male Adapter



Detent	Part Number
SB	<a href="#">SF1115-6087</a>
FD	<a href="#">SF1115-6086</a>

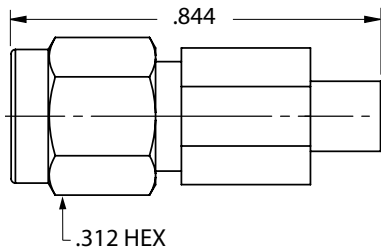
# SMPM Series

## SMPM Male to SMA Female Adapter



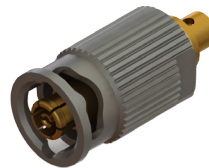
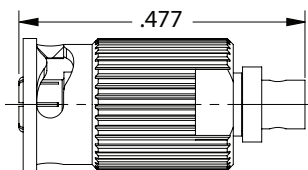
Detent	Part Number
SB	<a href="#">SF1132-6026</a>
FD	<a href="#">SF1132-6027</a>

## SMPM Male to SMA Male Adapter



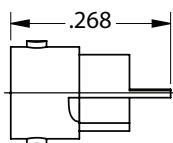
Detent	Part Number
SB	<a href="#">SF1080-6004</a>
FD	<a href="#">SF1080-6005</a>

## Female QB<sup>®</sup> Cable Connector



Cable	Part Number
0.047	<a href="#">3221-60003</a>
0.085	<a href="#">3221-60004</a>

## Male PCB QB<sup>®</sup> Edge Launch Connector

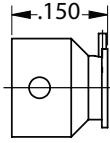


Detent	Part Number
SB	<a href="#">3211-60118</a>

*\*TD' suffix are pre-tinned*

# SMPM Series

## Male PCB QB<sup>®</sup> Surface Mount Connector, R/A

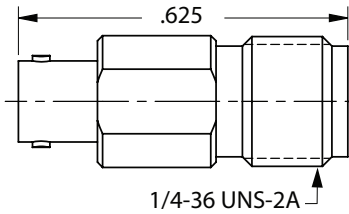


### Part Number

3211-60112

*‘TD’ suffix are pre-tinned*

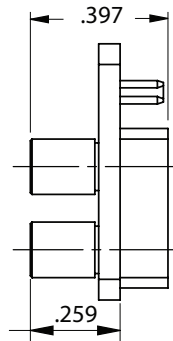
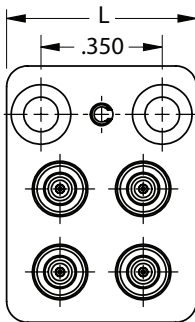
## SMPM Male QB<sup>®</sup> to 2.92mm Female Adapter



### Part Number

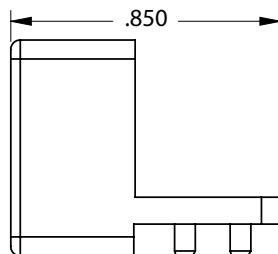
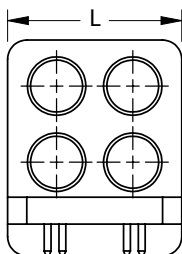
SF1132-6078

## VITA 67.1 / 67.2 Backplane Module



Part Number	L	Decr.
<a href="#">SF1132-6037</a>	.548"	4 Position, 67.1
<a href="#">SF1132-6036</a>	1.120"	8 Position, 67.2

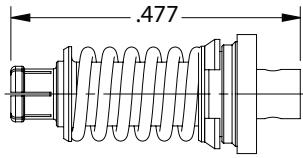
## VITA 67.1 / 67.2 Plug-In Module



Part Number	L	Decr.
<a href="#">SF9321-60015</a>	.548"	4 Position, 67.1
<a href="#">SF9321-60013</a>	1.120"	8 Position, 67.2

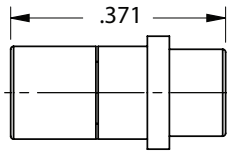
# SMPM Series

## VITA 67.1 / 67.2 Plug-In Contact



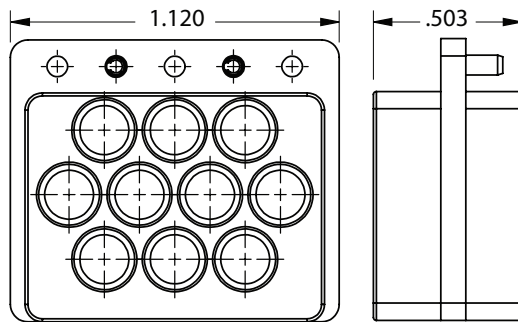
Cable	Part Number
0.047	<a href="#">3221-40019</a>
0.085	<a href="#">3221-40022</a>

## SMPM Male to Male VITA 67.3 Plug-In Contact Adapter



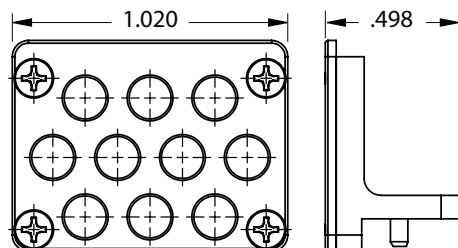
Part Number
<a href="#">SF1132-6067</a>

## VITA 67.3C 10-Position Backplane Module



Part Number	Descr.
<a href="#">SF9321-60059</a>	10 Position, 67.3

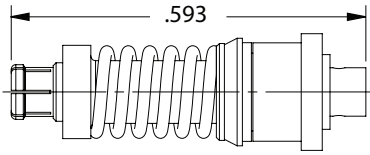
## VITA 67.3C 10-Position Plug-In Module



Part Number	Descr.
<a href="#">SF9311-60097</a>	10 Position, 67.3

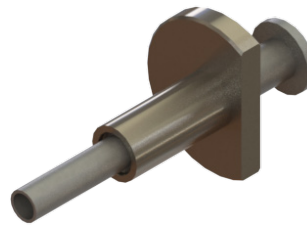
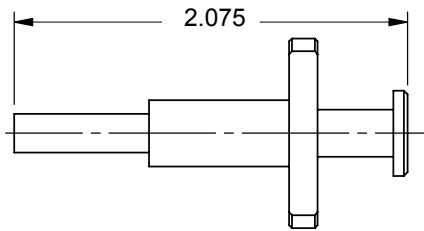
# SMPM Series

## VITA 67.3 Backplane Contact, Floating



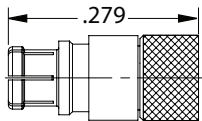
Cable	Part Number
0.047	<a href="#">3221-40071</a>
0.085	<a href="#">3221-40066</a>

## Female VITA Contact Removal Tool



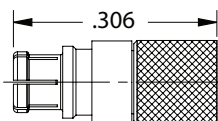
Part Number	Descr.
<a href="#">500-32-015</a>	VITA 67.3
<a href="#">500-32-022</a>	VITA 67.1 / 67.2

## Female Short



Part Number
<a href="#">8032-4007</a>

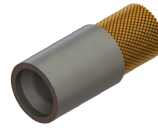
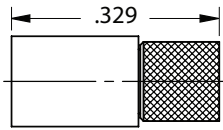
## Female Termination



Part Number
<a href="#">8032-4003</a>

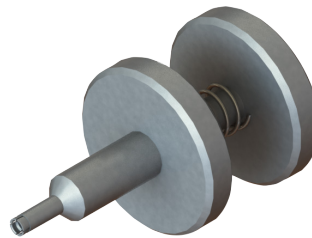
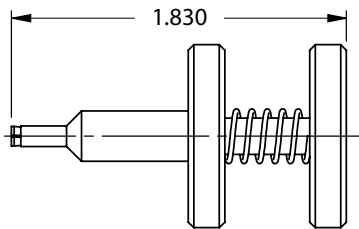
# SMPM Series

## Male Termination



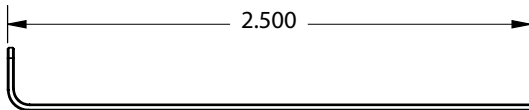
Detent	Part Number
SB	<a href="#">8032-6002</a>
FD	<a href="#">8032-6001</a>

## Female Bullet Removal Tool



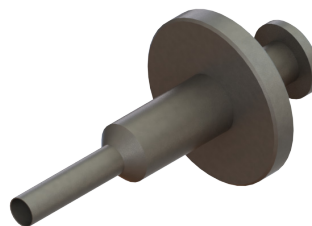
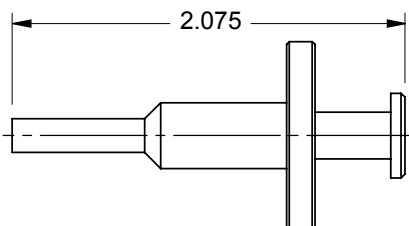
Part Number
<a href="#">500-32-007</a>

## Female Cable Removal Tool

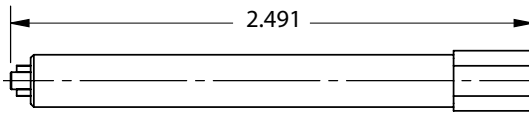


Part Number
<a href="#">500-32-010</a>

## Male Panel Removal Tool



Part Number
<a href="#">500-32-004</a>



Detent	Part Number
FD	<a href="#">500-32-008</a>
CM	<a href="#">500-32-009</a>

# SMPS Series

## SMPS Interface at a Glance

SV Microwave offers a complete line of SMPS connectors. The SMPS connector utilizes the same great features of the SMP and SMPM connector series in an even smaller package. The SMPS series is ideal in applications where density is of the utmost importance.

### Electrical Specifications

Impedance	50Ω
Frequency	100 GHz
VSWR	1.10:1 to 26.5 GHz typ.; 1.25:1 to 65 GHz typ.
Insertion Loss	.07 √ f
Shielding Effectiveness	≥ -80 dB typ.
Dielectric Withstanding Voltage	250 VRMS

### Mechanical Specifications

	<b>SB</b>	<b>FD</b>
Mating Cycles	500	100
Force to Engage/Disengage	1.2 / 1.0 lbs	2.5 / 4.5 lbs
Axial Misalignment		.010"
Radial Misalignment		± .010"

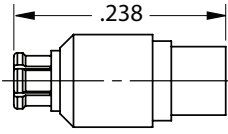
### Environmental Specifications

Temperature Rating	-65°C to +165°C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition D, 20 Gs
Shock	MIL-STD-202, Method 213, Condition I, 100 Gs
Thermal Shock	MIL-STD-202, Method 107. Cond. B, -65°C to +165°C
Barometric Pressure (Altitude)	MIL-STD-202, Method 105, Condition C, 70k Ft.

Note: Specifications, dimensions and images are typical for the series and may vary by part number

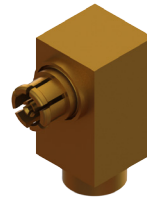
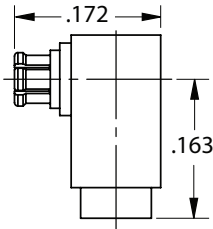
# SMPS Series

## Female Cable Connector



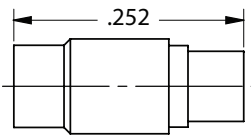
Cable	Part Number
0.047	<a href="#">3821-40001</a>

## Female Cable Connector, Swept R/A



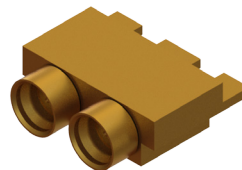
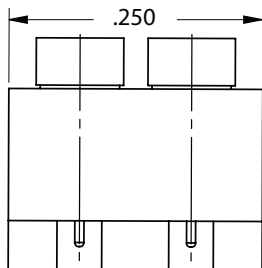
Cable	Part Number
0.047	<a href="#">3822-40001</a>

## Male Cable Connector



Detent	Cable	Part Number
SB	0.047	<a href="#">3811-40002</a>
FD	0.047	<a href="#">3811-40001</a>

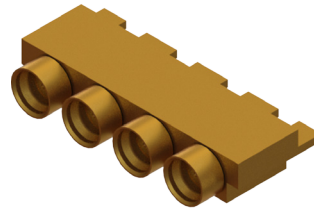
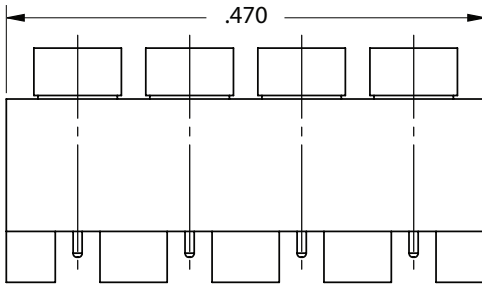
## Male Edge Launch Connector, 2 Port



Detent	Part Number
SB	<a href="#">3811-60050</a>
FD	<a href="#">3811-60049</a>

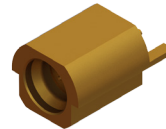
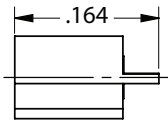
# SMPS Series

## Male Edge Launch Connector, 4 Port



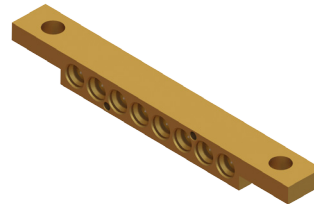
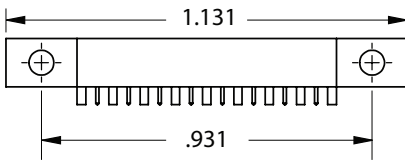
Detent	Part Number
SB	<a href="#">3811-60052</a>
FD	<a href="#">3811-60051</a>

## Male PCB Edge Launch Connector



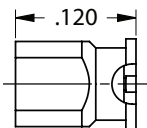
Detent	Part Number
SB	<a href="#">3811-40004</a>
FD	<a href="#">3811-40003</a>

## Male PCB Edge Launch Connector, 8 Port



Detent	Part Number
FD	<a href="#">3811-60019</a>

## Male PCB Surface Mount Connector

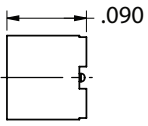


Detent	Part Number
SB	<a href="#">3811-40023</a>
FD	<a href="#">3811-40022</a>

SMPS Series

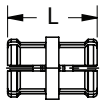
# SMPS Series

## Male PCB Surface Mount Hermetic Connector, (.009" Pin)



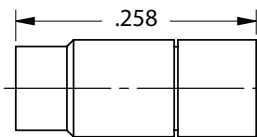
Detent	Part Number
SB	<a href="#">3811-60005</a>
FD	<a href="#">3811-60006</a>

## SMPS Female to Female Adapter



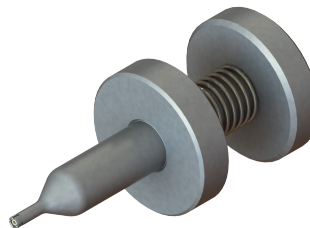
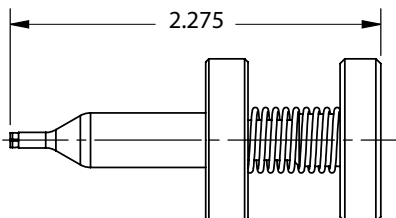
Part Number	L
<a href="#">1138-4001</a>	.098"
<a href="#">1138-4002</a>	.118"
<a href="#">1138-4003</a>	.134"
<a href="#">1138-4004</a>	.188"

## Male Short



Detent	Part Number
SB	<a href="#">8038-6005</a>
FD	<a href="#">8038-6006</a>

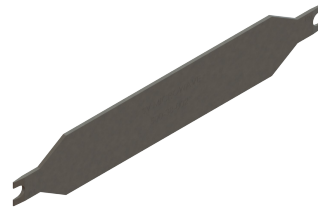
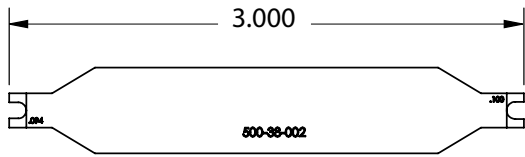
## Female Bullet Removal Tool



Part Number
<a href="#">500-38-004</a>

# SMPS Series

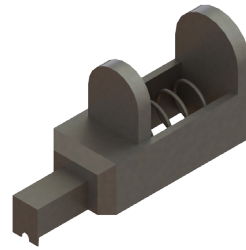
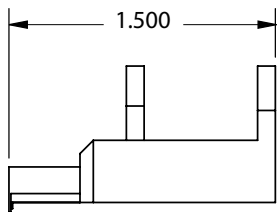
## Female Cable Removal Tool



Part Number

500-38-002

## Female Removal Tool



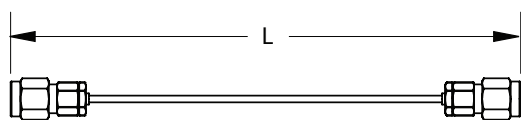
Part Number

500-38-003

## Cable Assemblies

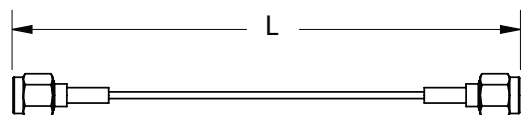
SV Microwave offers a complete line of high frequency cable assemblies utilizing coaxial cables ranging from Ø.020" to Ø.300" and larger. All of our cable technicians are J-STD certified, and we have extensive experience providing cable assemblies to the most demanding harsh environment and precision, high performance applications. Our fixed length catalog product offering represents only a small part of our total product offering and capabilities. For custom configurations including low loss, phase stable, delay/phase matched, armored, small diameter and semi-rigid (including custom bends), please contact our sales and marketing department.

### 2.92mm Male to 2.92mm Male Cable Assembly



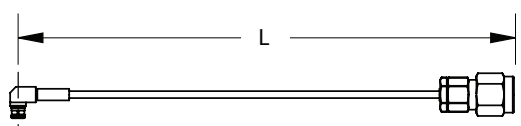
Cable	Part Number	L
0.047	<a href="#">7015-0717</a>	6"
0.047	<a href="#">7015-0718</a>	12"
0.047	<a href="#">7015-0802</a>	24"
0.085	<a href="#">7015-0803</a>	6"
0.085	<a href="#">7015-0615</a>	12"
0.085	<a href="#">7015-0616</a>	24"
0.085	<a href="#">7015-0617</a>	36"

### SMA Male to SMA Male Cable Assembly



Cable	Part Number	L
.047	<a href="#">7029-2555</a>	6"
.047	<a href="#">7029-2556</a>	12"
.047	<a href="#">7029-2557</a>	24"
.085	<a href="#">7029-2552</a>	6"
.085	<a href="#">7029-2553</a>	12"
.085	<a href="#">7029-2554</a>	24"

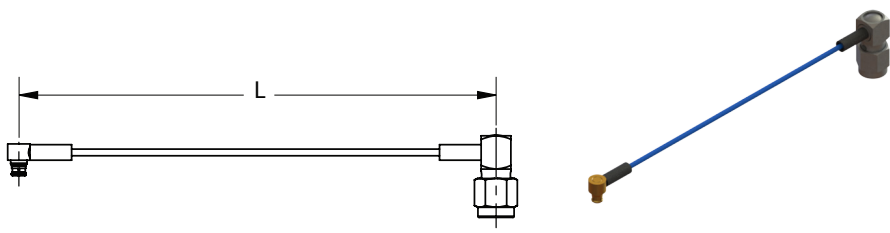
### SMP Female R/A to 2.92mm Male Cable Assembly



Cable	Part Number	L
0.047	<a href="#">7012-1066</a>	6"
0.047	<a href="#">7012-1067</a>	12"
0.047	<a href="#">7012-1290</a>	24"
0.085	<a href="#">7012-1287</a>	6"
0.085	<a href="#">7012-1288</a>	12"
0.085	<a href="#">7012-1289</a>	24"

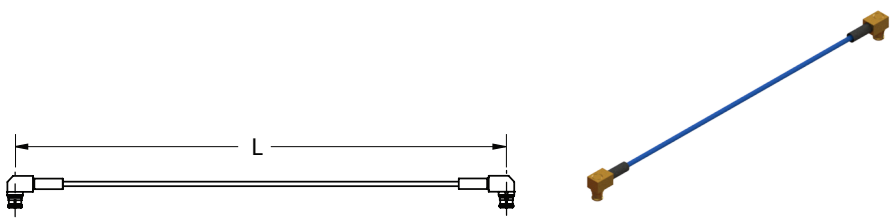
# Cable Assemblies

## SMP Female R/A to SMA Male R/A Cable Assembly



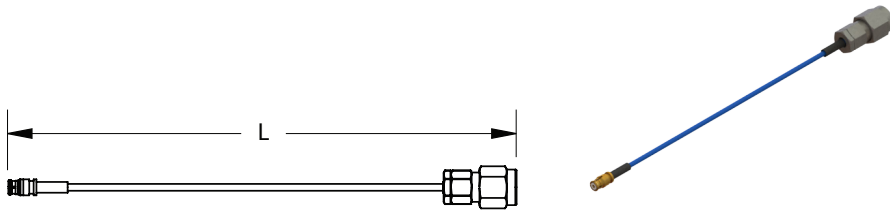
Cable	Part Number	L
.047	<a href="#">7012-1330</a>	6"
.047	<a href="#">7012-1331</a>	12"
.047	<a href="#">7012-1332</a>	24"
.085	<a href="#">7012-1327</a>	6"
.085	<a href="#">7012-1328</a>	12"
.085	<a href="#">7012-1329</a>	24"

## SMP Female R/A to SMP Female R/A Cable Assembly



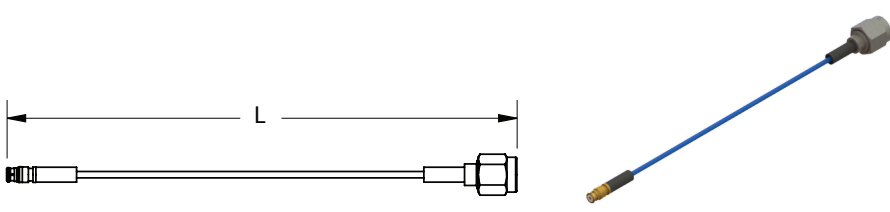
Cable	Part Number	L
0.047	<a href="#">7012-0802</a>	6"
0.047	<a href="#">7012-0803</a>	12"
0.047	<a href="#">7012-0804</a>	24"
0.085	<a href="#">7012-0799</a>	6"
0.085	<a href="#">7012-0800</a>	12"
0.085	<a href="#">7012-0801</a>	24"

## SMP Female to 2.92mm Male Cable Assembly



Cable	Part Number	L
0.047	<a href="#">7012-1064</a>	6"
0.047	<a href="#">7012-1065</a>	12"
0.047	<a href="#">7012-1286</a>	24"
0.085	<a href="#">7012-1283</a>	6"
0.085	<a href="#">7012-1284</a>	12"
0.085	<a href="#">7012-1285</a>	24"

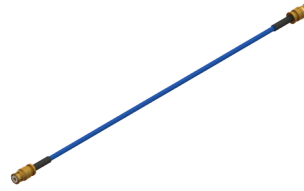
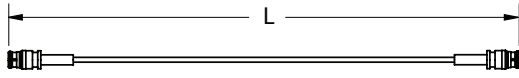
## SMP Female to SMA Male Cable Assembly



Cable	Part Number	L
.047	<a href="#">7012-1324</a>	6"
.047	<a href="#">7012-1325</a>	12"
.047	<a href="#">7012-1326</a>	24"
.085	<a href="#">7012-1321</a>	6"
.085	<a href="#">7012-1322</a>	12"
.085	<a href="#">7012-1323</a>	24"

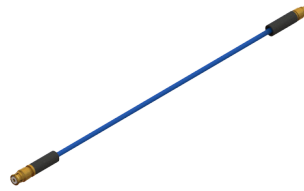
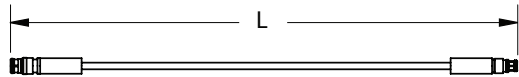
# Cable Assemblies

## SMP Female to SMP Female Cable Assembly



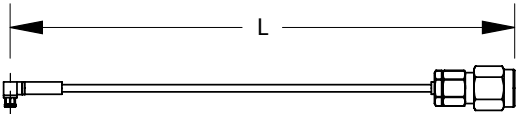
Cable	Part Number	L
0.047	<a href="#">7012-0796</a>	6"
0.047	<a href="#">7012-0797</a>	12"
0.047	<a href="#">7012-0798</a>	24"
0.085	<a href="#">7012-1291</a>	6"
0.085	<a href="#">7012-1292</a>	12"
0.085	<a href="#">7012-1293</a>	24"

## SMP Female to SMPM Female Cable Assembly



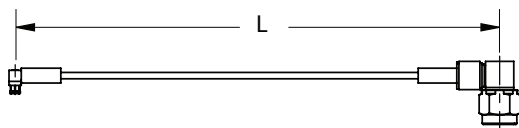
Cable	Part Number	L
0.047	<a href="#">7012-1294</a>	6"
0.047	<a href="#">7012-1295</a>	12"
0.047	<a href="#">7012-1296</a>	24"
0.085	<a href="#">7012-1297</a>	6"
0.085	<a href="#">7012-1298</a>	12"
0.085	<a href="#">7012-1299</a>	24"

## SMPM Female R/A to 2.92mm Male Cable Assembly



Cable	Part Number	L
0.047	<a href="#">7032-6759</a>	6"
0.047	<a href="#">7032-6760</a>	12"
0.047	<a href="#">7032-7152</a>	24"

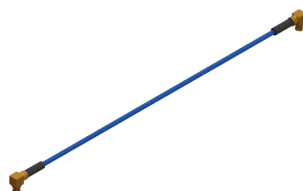
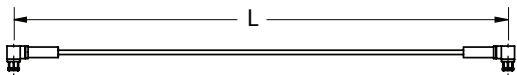
## SMPM Female R/A to SMA Male R/A Cable Assembly



Cable	Part Number	L
.047	<a href="#">7032-7237</a>	6"
.047	<a href="#">7032-7238</a>	12"
.047	<a href="#">7032-7239</a>	24"
.085	<a href="#">7032-7240</a>	6"
.085	<a href="#">7032-7241</a>	12"
.085	<a href="#">7032-7242</a>	24"

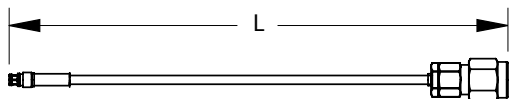
# Cable Assemblies

## SMPM Female R/A to SMPM Female R/A Cable Assembly



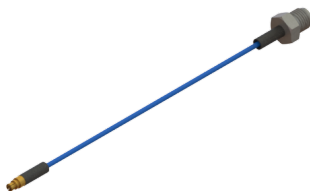
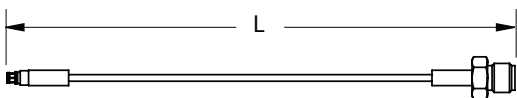
Cable	Part Number	L
0.047	<a href="#">7032-6354</a>	6"
0.047	<a href="#">7032-6355</a>	12"
0.047	<a href="#">7032-6356</a>	24"
0.085	<a href="#">7032-7156</a>	6"
0.085	<a href="#">7032-7157</a>	12"
0.085	<a href="#">7032-7158</a>	24"

## SMPM Female to 2.92mm Male Cable Assembly



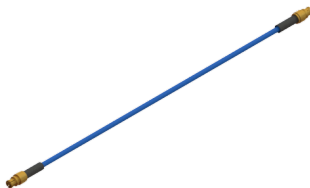
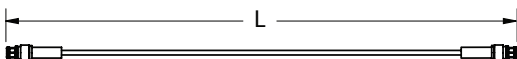
Cable	Part Number	L
0.047	<a href="#">7032-6757</a>	6"
0.047	<a href="#">7032-6758</a>	12"
0.047	<a href="#">7032-7151</a>	24"

## SMPM Female to SMA Female Cable Assembly



Cable	Part Number	L
.047	<a href="#">7029-2558</a>	6"
.047	<a href="#">7029-2559</a>	12"
.047	<a href="#">7029-2560</a>	24"
.085	<a href="#">7029-2561</a>	6"
.085	<a href="#">7029-2562</a>	12"
.085	<a href="#">7029-2563</a>	24"

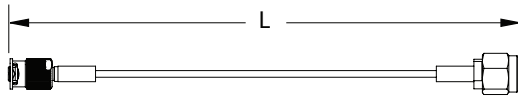
## SMPM Female to SMPM Female Cable Assembly



Cable	Part Number	L
0.047	<a href="#">7032-6351</a>	6"
0.047	<a href="#">7032-6352</a>	12"
0.047	<a href="#">7032-6353</a>	24"
0.085	<a href="#">7032-7153</a>	6"
0.085	<a href="#">7032-7154</a>	12"
0.085	<a href="#">7032-7155</a>	24"

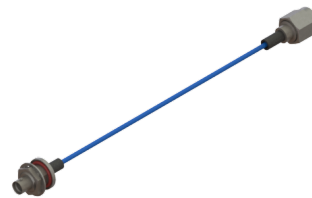
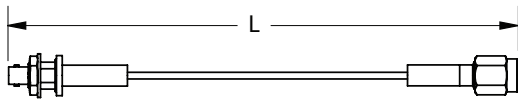
# Cable Assemblies

## SMP Female QB<sup>®</sup> to SMA Male Cable Assembly



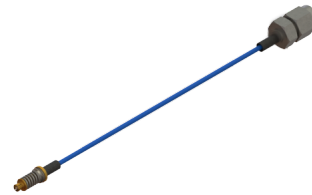
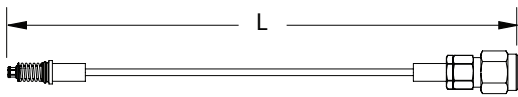
Cable	Part Number	L
0.047	<a href="#">7012-1301</a>	6"
0.047	<a href="#">7012-1302</a>	12"
0.047	<a href="#">7012-1303</a>	24"
0.085	<a href="#">7012-1085</a>	6"
0.085	<a href="#">7012-1084</a>	12"
0.085	<a href="#">7012-1300</a>	24"

## SMP Male QB<sup>®</sup> Bulkhead to SMA Male Cable Assembly



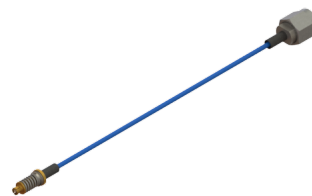
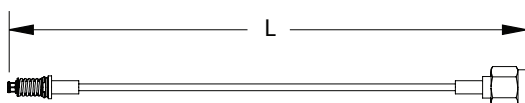
Cable	Part Number	L
0.085	<a href="#">7012-1086</a>	6"
0.085	<a href="#">7012-1087</a>	12"

## SMPM Female VITA 67.1/67.2 to 2.92mm Male Cable Assembly



Cable	Part Number	L
0.047	<a href="#">7032-7159</a>	6"
0.047	<a href="#">7032-7160</a>	12"
0.047	<a href="#">7032-7161</a>	24"
0.085	<a href="#">7032-7162</a>	6"
0.085	<a href="#">7032-7163</a>	12"
0.085	<a href="#">7032-7164</a>	24"

## SMPM Female VITA 67.1/67.2 to SMA Male Cable Assembly



Cable	Part Number	L
0.047	<a href="#">7032-6728-060</a>	6"
0.047	<a href="#">7032-6728-120</a>	12"
0.085	<a href="#">7032-6729-060</a>	6"
0.085	<a href="#">7032-6729-120</a>	12"

# Rapid Response Cable Builder



**Cables Ship in 5 Days!**

## Features & Benefits

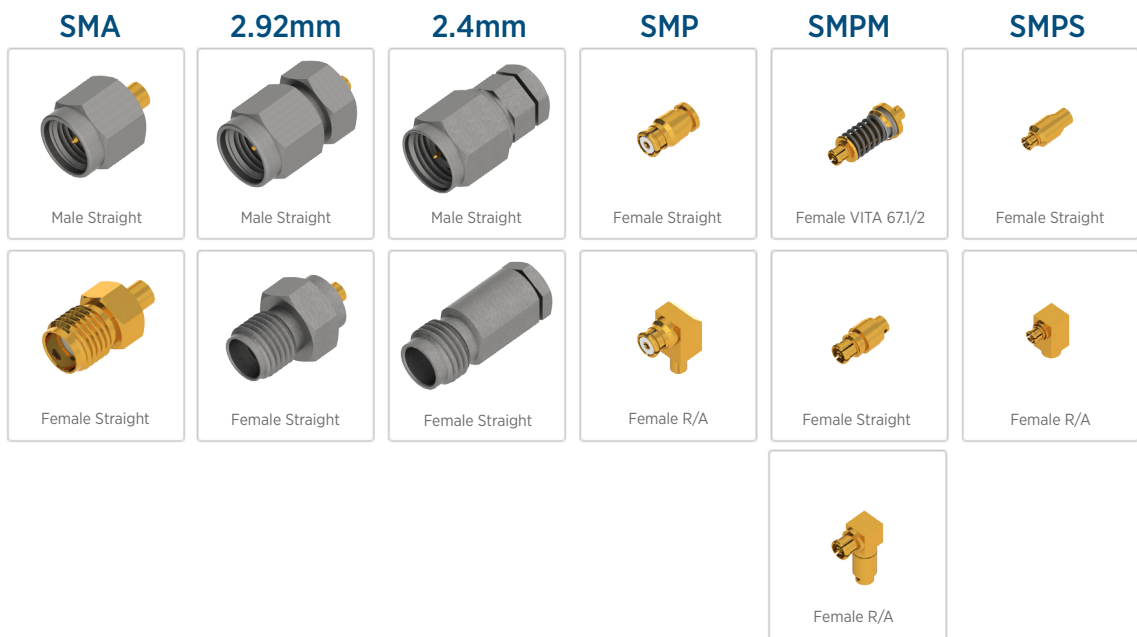
- Now featuring our VITA 67.1 / VITA 67.2 contact!
- Most user friendly RF Cable Builder application in the market
- Choose from a variety of in-stock standard connector series and cable types with length up to 99"
- Over 125 connector and cable combinations available
- Simple part number configuration (see reverse)
- Instantly view pricing, mechanical/electrical specifications and data drawings
- Online order placement (credit card or PO)

## Applications

- Prototype builds
- Military / Aerospace
- Broadband
- Instrumentation
- Telecommunications

		2.92mm	2.4 mm	SMA	SMP	SMPM	SMPS
Cable Types	Ø.047	●	●	●	●	●	●
	Ø.085	●	●	●	●	●	●
	Ø.140	●	●				

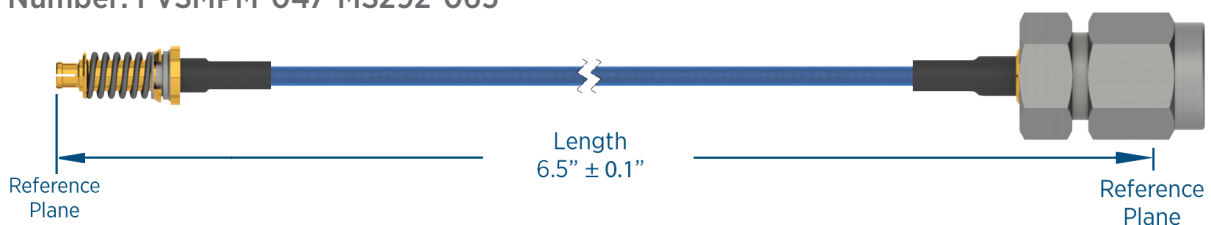
## Connector Selections



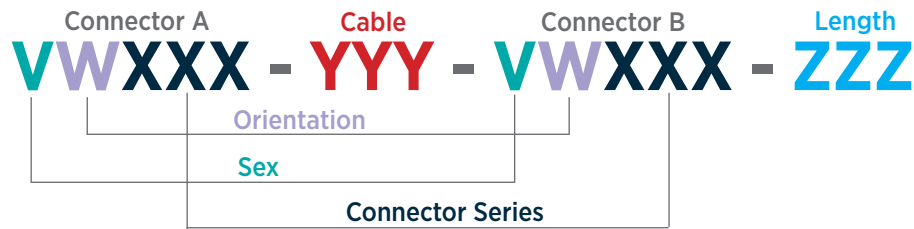
**Example:**

**SMPM Female VITA to 2.92mm Male 6.5" Cable Assembly for Ø.047 Cable**

Part Number: FVSMPM-047-MS292-065



## Rapid Response Cable Assemblies P/N Builder



- Step 1:** Select Connector A Sex
- Step 2:** Select Connector A Orientation
- Step 3:** Select Connector A Series
- Step 4:** Select Cable Type
- Step 5:** Select Connector B Sex
- Step 6:** Select Connector B Orientation
- Step 7:** Select Connector B Series
- Step 8:** Specify Cable Length (in inches)

### Cable Options per Series

Steps 1 & 5 Sex	
Male	<b>M</b>
Female	<b>F</b>
VITA	<b>V</b>

Steps 2 & 6 Orientation	
Straight	<b>S</b>
Right Angle	<b>R</b>

Steps 3 & 7 Series	
SMA	<b>SMA</b>
SMP	<b>SMP</b>
SMPM	<b>SMPM</b>
SMPS	<b>SMPS</b>
2.92 mm	<b>292</b>
2.4 mm	<b>24</b>

Step 4 Cable	
∅.047 Cable	<b>047</b>
∅.085 Cable	<b>085</b>
∅.140 Cable	<b>140</b>

Step 8 Length			
Cable	Min	Max	
.047	3.0"	<b>030</b>	99.0" <b>990</b>
.085	6.0"	<b>060</b>	99.0" <b>990</b>
.140	12.0"	<b>120</b>	99.0" <b>990</b>

Delay Match Specifications	
Min - 10"	<b>± 2 ps</b>
10" - Max	<b>± 10 ps</b>

Connector 1	Cable	Connector 2						
		2.92 mm	2.4 mm	SMA	SMP	SMPM	SMPS	
2.92 mm	.047	•	•	•	•	•	•	
	.085	•	•	•	•	•		
	.140	•	•					
	2.4 mm	.047	•	•	•	•	•	•
		.085	•	•	•	•	•	
	.140	•	•					
SMA	.047	•	•	•	•	•	•	
	.085	•	•	•	•	•		
SMP	.047	•	•	•	•	•	•	
	.085	•	•	•	•	•		
SMPM	.047	•	•	•	•	•	•	
	.085	•	•	•	•	•		
SMPS	.047	•	•	•	•	•	•	

Cable Tolerances			
Cable	Length Tolerance (Min - 12")	Length Tolerance (12" - Max)	Min Length Increments
.047	± 0.1"	± 0.5"	0.1"
.085	± 0.1"	± 0.5"	0.1"
.140	N/A	± 0.5"	0.1"

### Example:

<b>Description</b>	Female VITA SMPM to Male Straight 2.92mm 6.5" Cable Assembly for ∅.047 cable
<b>Part Number</b>	<b>FVSMPM - 047 - MS292 - 065</b>

Connector 1			Cable	Connector 2			
Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
<b>Sex</b>	<b>Orientation</b>	<b>Series</b>	<b>Cable</b>	<b>Sex</b>	<b>Orientation</b>	<b>Series</b>	<b>Length</b>
<b>F</b>	<b>V</b>	<b>SMPM</b>	<b>047</b>	<b>M</b>	<b>S</b>	<b>292</b>	<b>065</b>

# SMPx Applications

## SMP / SMPM / SMPS Board-to-Board Applications

SMP/SMPM/SMPS series connectors are commonly used in a shroud-bullet-shroud configuration. This configuration is ideal for applications where mating cycles are high.

Typically one of the male shrouds will be smooth bore and the other one will be full detent or limited detent. This ensures that the bullet will remain mated to the full detent side when the system is disengaged.

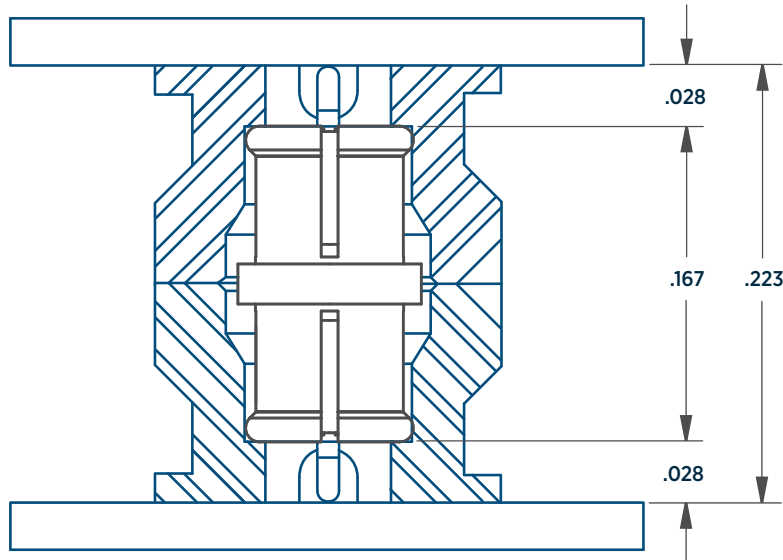


Figure 1: SMPM Shroud-Bullet-Shroud System

## SMP / SMPM / SMPS Male Interface Applications

Another common technique is to make the male smooth bore shroud a 'Catcher's Mitt'. The 'Catcher's Mitt' interface style has an extra chamfer on the opening to help align the bullet during mating.

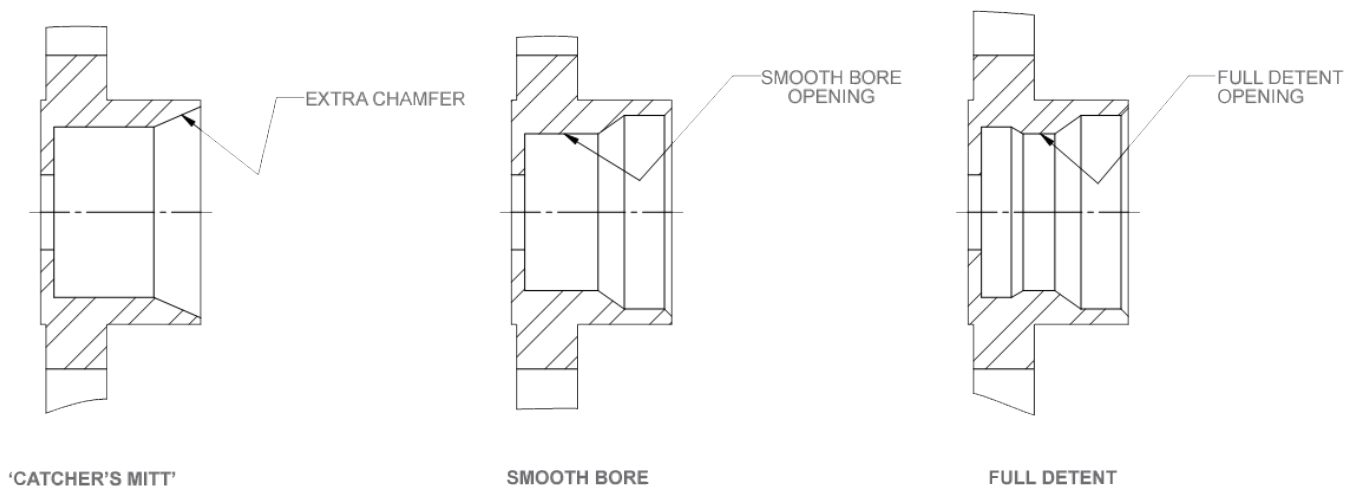


Figure 2: 'Catcher's Mitt', Smooth Bore and Full Detent Interfaces

## SMP / SMPM / SMPS Misalignment Applications

SMP/SMPM/SMPS connectors are designed to perform well, even under misaligned conditions. The image below shows how SV Microwave defines radial and axial misalignment.

Radial and axial tolerances are per mating interface. It is generally assumed that if a full detent interface is used on one side, the bullet will be contacting the reference plane of the shroud at some point under any condition.

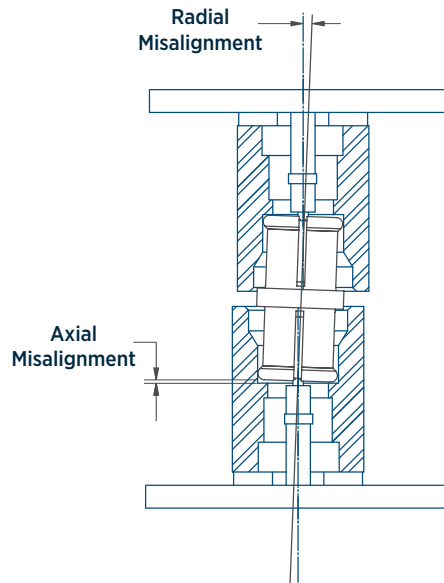


Figure 3: Radial and Axial Misalignment Definitions

## SMP / SMPM / SMPS Float Mount Applications

SV Microwave also offers spring-loaded female cable connectors and adapters. The spring force ensures that the reference planes will remain fully mated under axial misalignment. Spring-loaded interfaces are ideal under conditions where vibration is expected or tolerance stack-up requires additional axial misalignment. SV Microwave can customize the spring length to provide the exact amount of axial tolerance needed for any application.

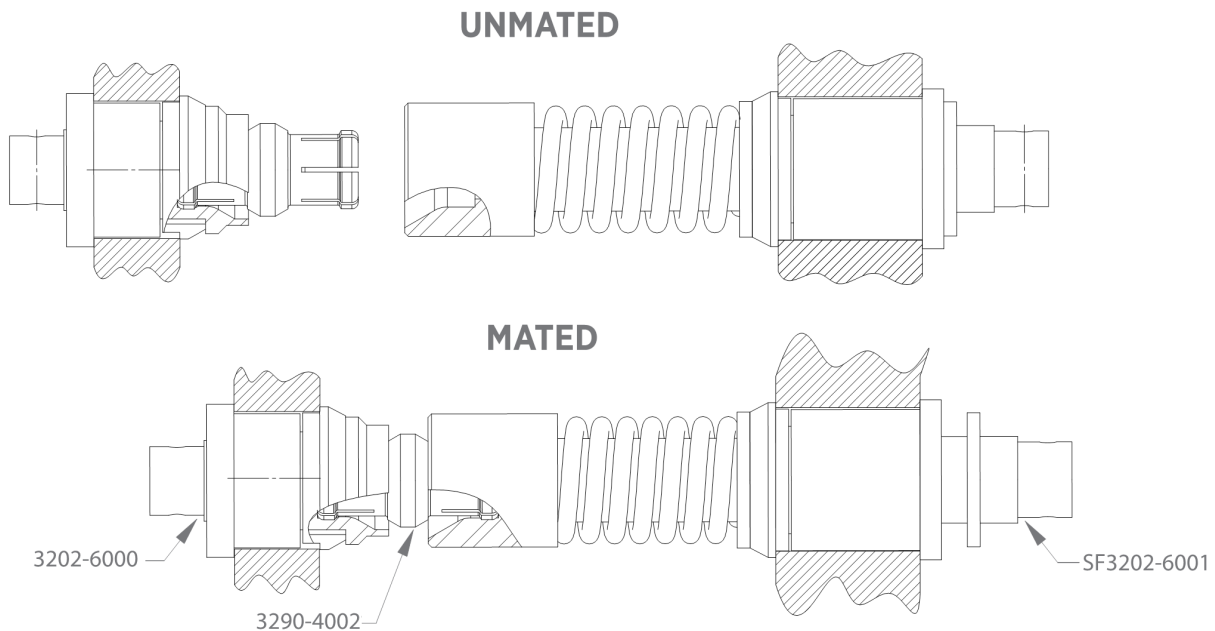


Figure 4: Snap-in Male Cable Connector and Snap-in Spring-Loaded Male Cable Connector and Bullet

# Footprint Design Process

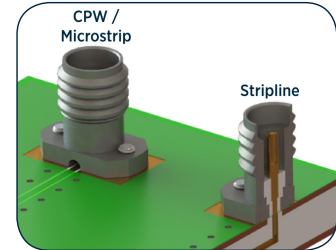
SV Microwave provides optimized PCB connector footprints as a service to our customers. Our engineers optimize the launch for electrical and mechanical performance using the steps detailed below.

## STEP 1: Submit Footprint Specification Sheet

Access our 'PCB Footprint Request' form on page 71 of the Appendix or link in the 'Resources' section of our website.

Enter key product information such as:

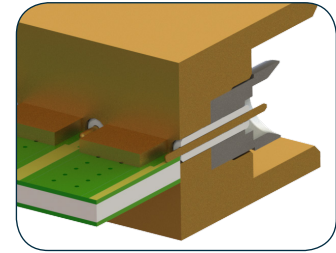
- Connector series
- Desired launch type
- Max operating frequency
- Desired VSWR/Return Loss
- PCB Characteristics



## STEP 2: SV Engineering Creates First Pass Footprint

Based on the information provided, our electrical engineers will create an electrical model to simulate performance. At this point, feedback is typically exchanged determining important parameters such as:

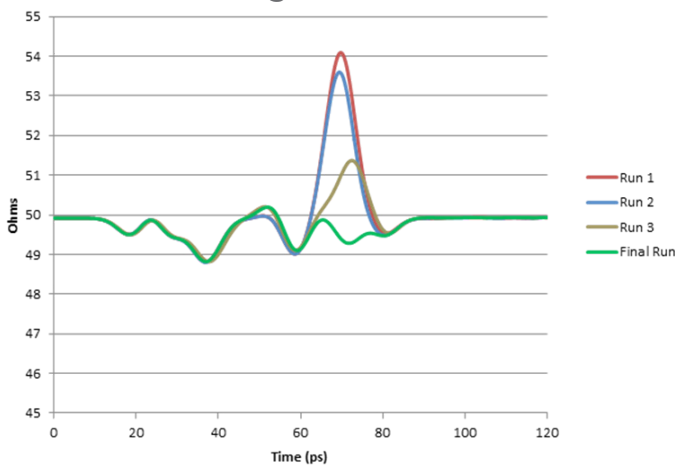
- Copper layer pull back from PCB edge
- Transmission line impedance accuracy based on calculators
- Tolerance of drilled holes and etched features
- Special fabrication requirements



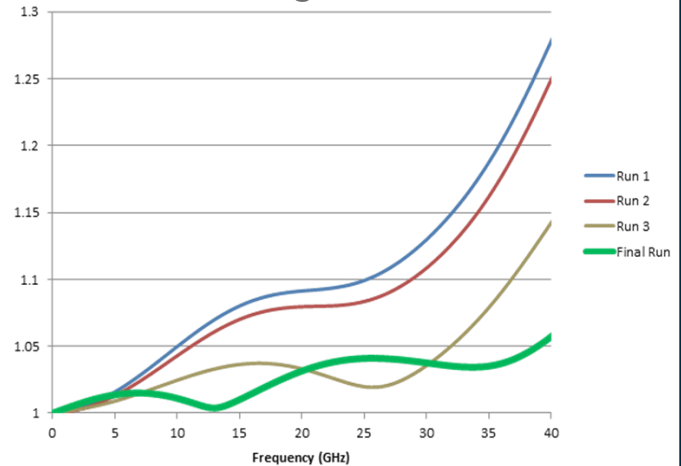
## STEP 3: Optimization Through Simulation

Our Electrical Engineers simulate your footprint using our EM simulation software. Mechanical dimensions are then modified via an iterative process until electrical requirements such as VSWR and impedance stability are met.

### TDR Design Iterations

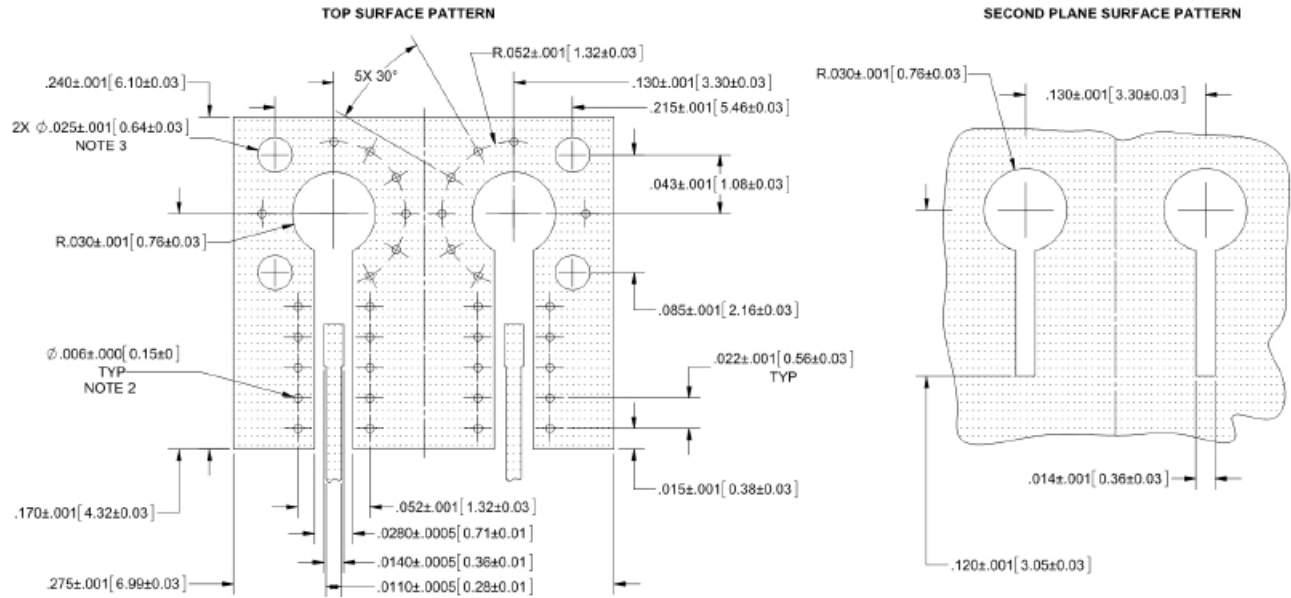


### VSWR Design Iterations



## STEP 4: Footprint is Complete

Once electrical requirements are met, a fully dimensioned PDF of the footprint is created. Electrical simulation plots, S2P files and other supported file types are available upon request

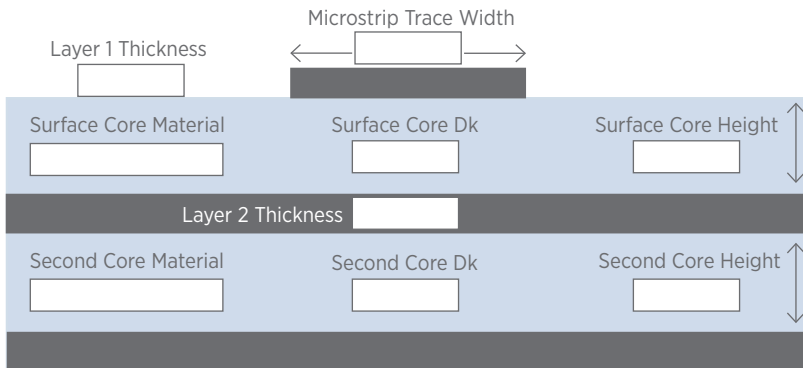


# PCB Footprint Request Form

## Custom PCB Footprint Application

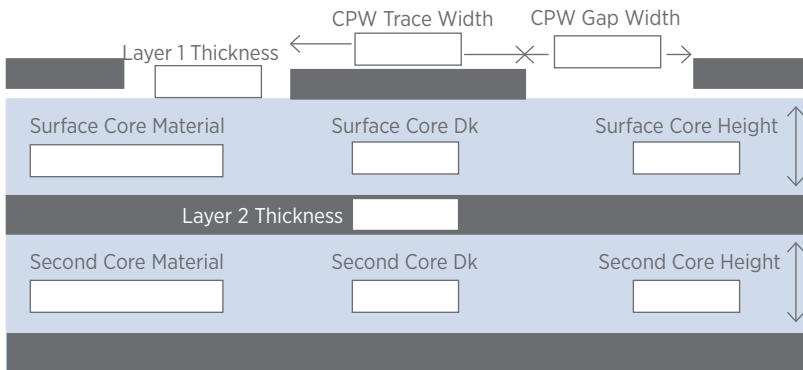
In order to effectively optimize our connector design for your specific application, please fill in the requested information in the appropriate section below and send submissions to [marketing@svmicrowave.com](mailto:marketing@svmicrowave.com) or fax to 561.842.6277. Your custom footprint will then be designed, simulated and sent to you in a timely manner. (Additional copies available on our website)

### Microstrip Line



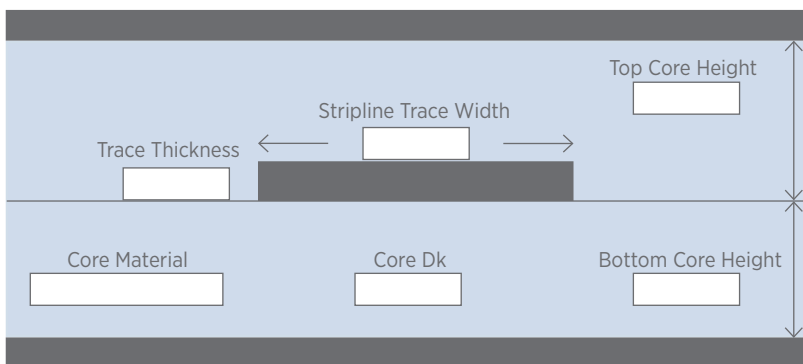
Required Information	
Connector	<input type="text"/>
Max. frequency	<input type="text"/>
VSWR/Return loss	<input type="text"/>
Solder mask	<input type="text"/>
Optional Information	
Copper pullback from edge	<input type="text"/>
Min. via diameter	<input type="text"/>
Min. via pad size	<input type="text"/>
Min. via distance from edge	<input type="text"/>

### Coplanar Waveguide (CPW)



Required Information	
Connector	<input type="text"/>
Max. frequency	<input type="text"/>
VSWR/Return loss	<input type="text"/>
Solder mask	<input type="text"/>
Optional Information	
Copper pullback from edge	<input type="text"/>
Min. via diameter	<input type="text"/>
Min. via pad size	<input type="text"/>
Min. via distance from edge	<input type="text"/>

### Stripline



Required Information	
Connector	<input type="text"/>
Max. frequency	<input type="text"/>
VSWR/Return loss	<input type="text"/>
Optional Information	
Min. via diameter	<input type="text"/>
Min. via pad size	<input type="text"/>
Backdrill stub length	<input type="text"/>
Backdrill fill	<input type="text"/>

\*Please attach additional documentation detailing the design features of the PCB including a full board stack-up.

# Frequency Chart

Type	Prefix	Freq (GHz)	VSWR*	DWV**	Coupling	Relative Size	Competitor Equivalents	Notes
7/16	84	6	1.15:1	4000	Threaded	3 X		
1.85mm	33	65	1.60:1	500	Threaded	1 X		Mates to 2.4mm
2.4mm	16	50	1.40:1	500	Threaded	1 X	OS-2.4	Mates to 1.85mm
2.92mm	15	40	1.34:1	750	Threaded	1 X	OS-2.92	Mates to SMA
3.5mm	92	26.5	1.30:1	500	Threaded	1 X	OS-3.5	Mates to SMA
BMA	17	22	1.15:1	1000	Slide-on	1 X	OSP	
BMMA	14	28	1.30:1	750	Slide-on	0.75 X	OSSP	
BMZ	89	18	1.20:1	1000	Slide-on	0.75 X		
BNC	47	6	1.20:1	1500	Bayonet	1.5 X		
BZ	88	2	1.10:1	1500	Slide-on	1.5 X		
PN	65	18	1.30:1	3000	Threaded	2.5 X		
PTNC	45	18	1.20:1	1500	Threaded	2 X		(a)
SC	52	11	1.30:1	3000	Threaded	3 X		
SMA	29	18	1.20:1	1000	Threaded	1 X	OSM	(a) (c)
SMB	23	4	1.10:1	1000	Slide-on	0.5 X		
SMC	22	10	1.40:1	1000	Threaded	0.5 X		
SMP	12	40	1.40:1	500	Snap-on	0.25 X	GPO, MMSP, OSMP	
SMPM	32	65	1.30:1	325	Snap-on	0.2 X	GPPO, MSSP, OSMPM	
SMPS	38	100	1.30:1***	250	Snap-on	0.15 X	G3PO	
SSMA	27	36	1.30:1	750	Threaded	0.75 X	OSSM	(b)
SVMS	49	23	1.30:1	1500	Snap-on	1 X	GMS	
TNC	40	15	1.30:1	1500	Threaded	2 X		(a)
TRIAX (BNC)	48	6	1.30:1	1500	Bayonet	2 X		
TRIAX (TNC)	48	11	1.30:1	1500	Threaded	2 X		
TYPE N	50	12.4	1.30:1	3000	Threaded	2.5 X		
ZMA	87	18	1.20:1	1500	Bayonet	1.5 X		

- (a) 12.4 GHz for mitered right angle version
- (b) 18 GHz for mitered right angle version
- (c) 26 GHz version available

- \* VSWR measured at max frequency
- \*\* DWV Values given at sea level and 25 degrees Celsius
- \*\*\* Measured at 65 GHz

- M39012 - Connectors
- M83517 - Stripline Connectors
- M55339 - Adapters
- M31031 - Blindmate Connectors
- M3933 - Attenuators

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<a href="#">1112-6114</a>	<a href="#">37</a>
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