

smp

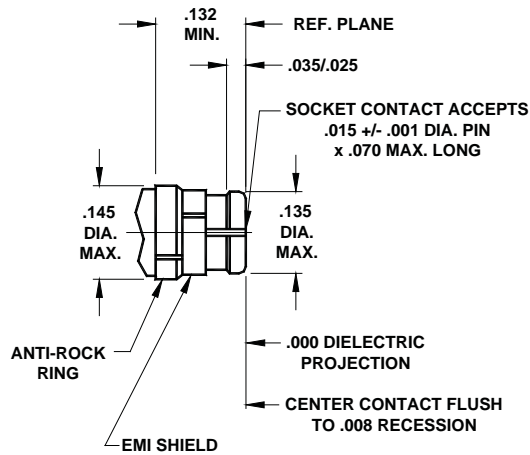


[www.dynawave.com](http://www.dynawave.com)

**dynawave**  
INCORPORATED

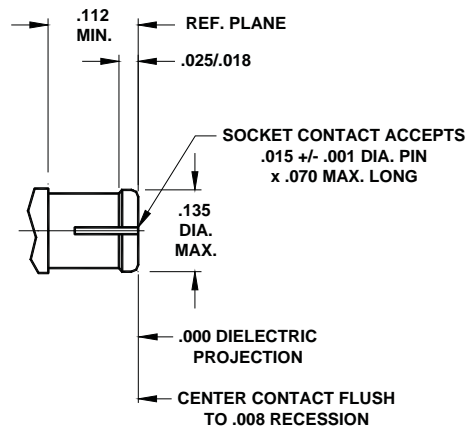
# smp interface

## socket (cable)



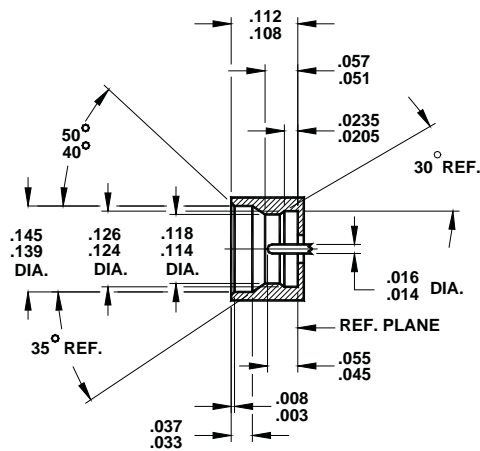
Mil-Std-348A  
Fig. 326.1a

## socket (adapter)

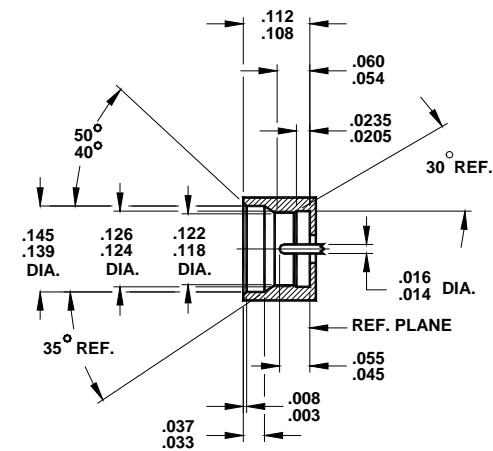


Mil-Std-348A  
Fig. 326.1

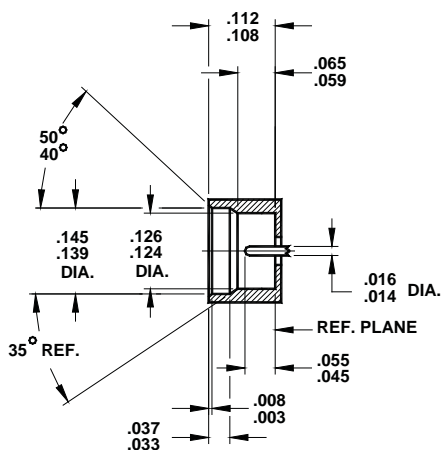
## pin (shroud)



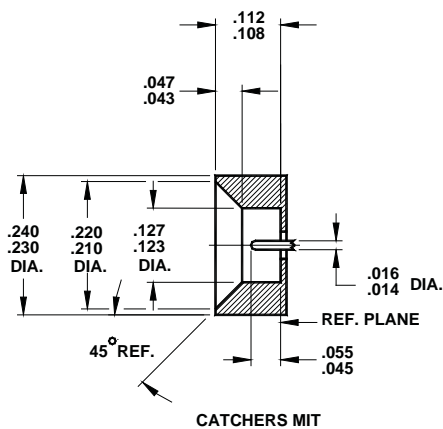
Mil-Std-348A  
Fig. 326.2



Mil-Std-348A  
Fig. 326.3

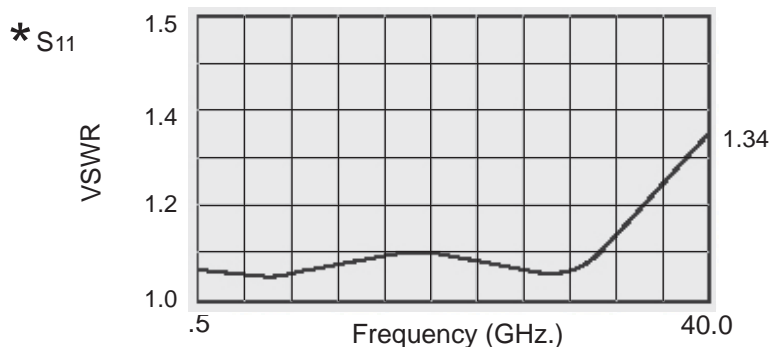


Mil-Std-348A  
Fig. 326.4



Mil-Std-348A  
Fig. 326.5

# smp specifications



The Dynawave SMP socket adapter, P/N 1100-2020-5450 has a Maximum VSWR of 1.35 : 1 through 40.0 Ghz. compared to DSCC published specification of 1.70 : 1 (DSCC P/N 94007ZCG-1)

## \* ELECTRICAL :

Frequency Range	DC TO 40.0 GHz.
*VSWR Max.	1.10 DC TO 23.0 GHz. 1.15 : 23.0 GHz. TO 26.5 GHz. 1.35 : 26.5 GHz. TO 40.0 GHz.
Insertion Loss	.10 dB x F/GHz.
Nominal Impedancs (OHMS)	50
Voltage Rating (Max. VRMS)	170
RF Leakage (Min. dB down, fully mated)	-80 dB - FGHz. TO 3.0 GHz. -65 dB FROM 3.0 TO 26.5 GHz. MIN.
Temperture Rating (Degrees Centigrade)	-65 °c TO +165 °c
Dielectric Withstanding Voltage (Max. VRMS)	500
Insulation Resistance (Min.MEGOHMS)	5,000
Center Contact (Socket) Resistance (Max. MILLIOHMS)	6.0
Outer Contact Resistance (Max. MILLIOHMS)	2.0

\* DYNAWAVE P/N 1100-2020-5450 DSCC P/N 94007ZCG-1

## MECHANICAL :

### CAPTIVATION-CENTER CONTACT

MINIMUM AXIAL FORCE : 1.5 LBS.  
MINIMUM RADIAL TORQUE : N/A

### MATING FORCES

Engagement (Max. Lbs.)	Full Detent 15.0, Limited Detent 10.0, Smooth Bore 2.0
Disengagement (Min. Lbs.)	Full Detent 5.0, Limited Detent 2.0, Smooth Bore 0.5
Durability (Max. Matings)	Full Detent (100), Limited Detent (250), Smooth Bore (1,000)
Axial Displacement (Inches)	.000/.010
Total Radial Misalignment (Inches)	.010 (.020 FOR DSCC #94007ZSP-6SC ONLY)

## ENVIRONMENTAL :

TemperatureCycling	MIL-STD-202, Method 102, Cond. C (-65 °c TO + 165 °c)
Shock	MIL-STD-202, Method 213, Cond. 1 (100 G's)
Vibrtion	MIL-STD-202, Method 204, Cond. D (20 G's)
BarometricPressure(Altitude)	MIL-STD-202, Method 105, Cond. C (70,000 FT.)(125 VRMS)
ThermalShock	MIL-STD-202, METHOD 107, COND. B (HIGH TEMP. 165 °c)
TemperatureRating	-65 °c TO +165 °c

## MATERIAL / FINISH :

### ADAPTER BODY

Beryllium Copper per ASTM B196/B, 196M-03 Copper Alloy #UNS C17300, Temper TD04.  
Gold per ATSM B 488, Type 1, Grade C, Class 1.25 Over Nickel per SAE-AMS-QQ-N-290, Class 1.

### SHROUD (PIN) HERMETIC SEAL - WITH 7070 GLASS BEAD

Iron Nickel Alloy per MIL-I-23011 (Kovar)  
Stainless per ASTM A581, or A582, Free Machining, Type 303, Condition A.  
Passivate per AMS 2700, Type 2, CLASS 4.  
Gold per ATSM B 488, Type 1, Grade C, Class 1.25 Over Nickel per SAE-AMS-QQ-N-290, Class 1.

### SHROUD (PIN) NON-HERMETIC

Stainless per ASTM A581, or A582, Free Machining, Type 303, Condition A.  
Passivate per AMS 2700, Type 2, CLASS 4.  
Gold per ATSM B 488, Type 1, Grade C, Class 1.25 Over Nickel per SAE-AMS- QQ-N-290, Class 1.

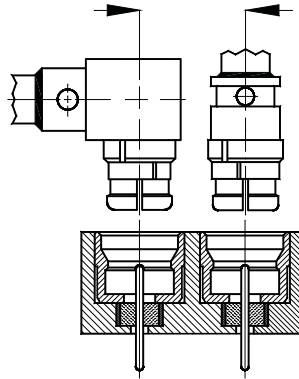
### CENTER CONTACT (SOCKET)

Beryllium Copper per ASTM B196/B, 196M-03, Copper Alloy #UNS C17300, Temper TD04.  
Gold per ATSM B 488, Type 1, Grade C, Class 1.25 Over Nickel per SAE-AMS- QQ-N-290, Class 1.

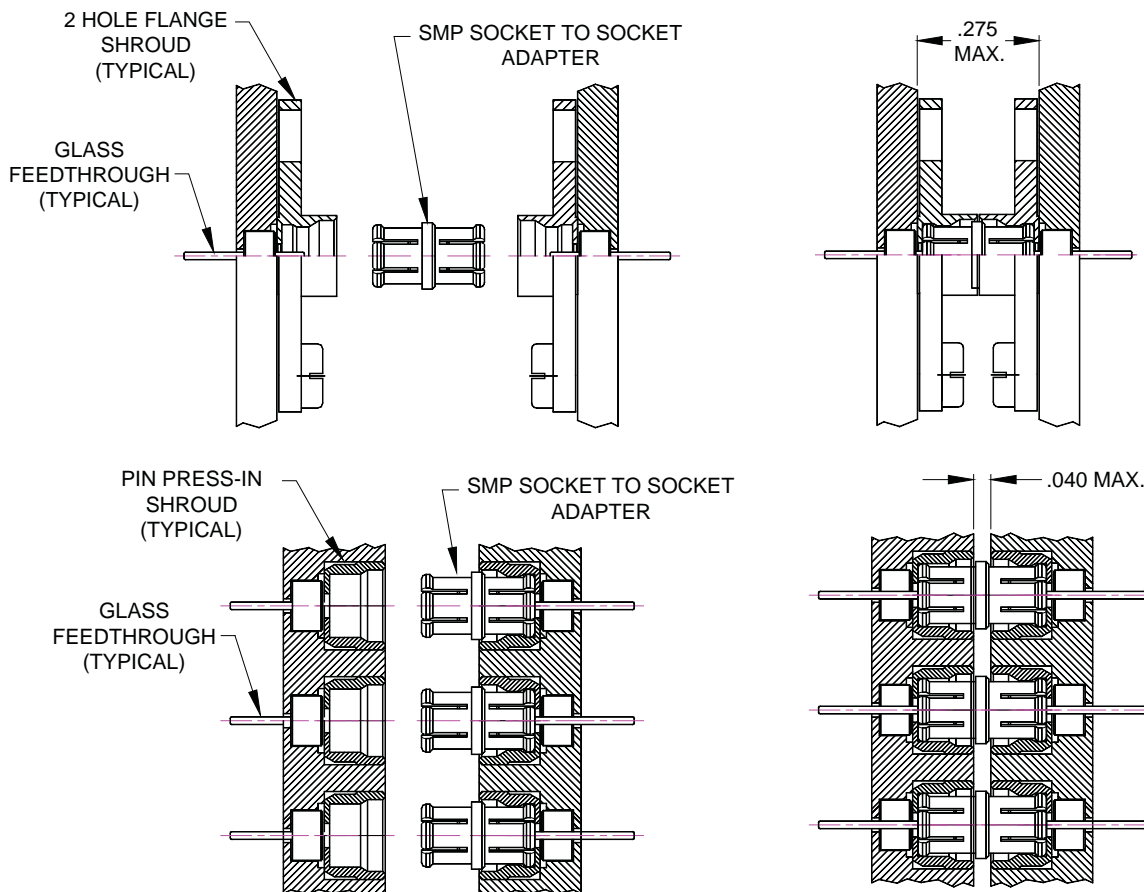
### INSULATOR

TEFLON PER ASTM D1710, Type 1, Class 1, Grade B.

# smp application notes



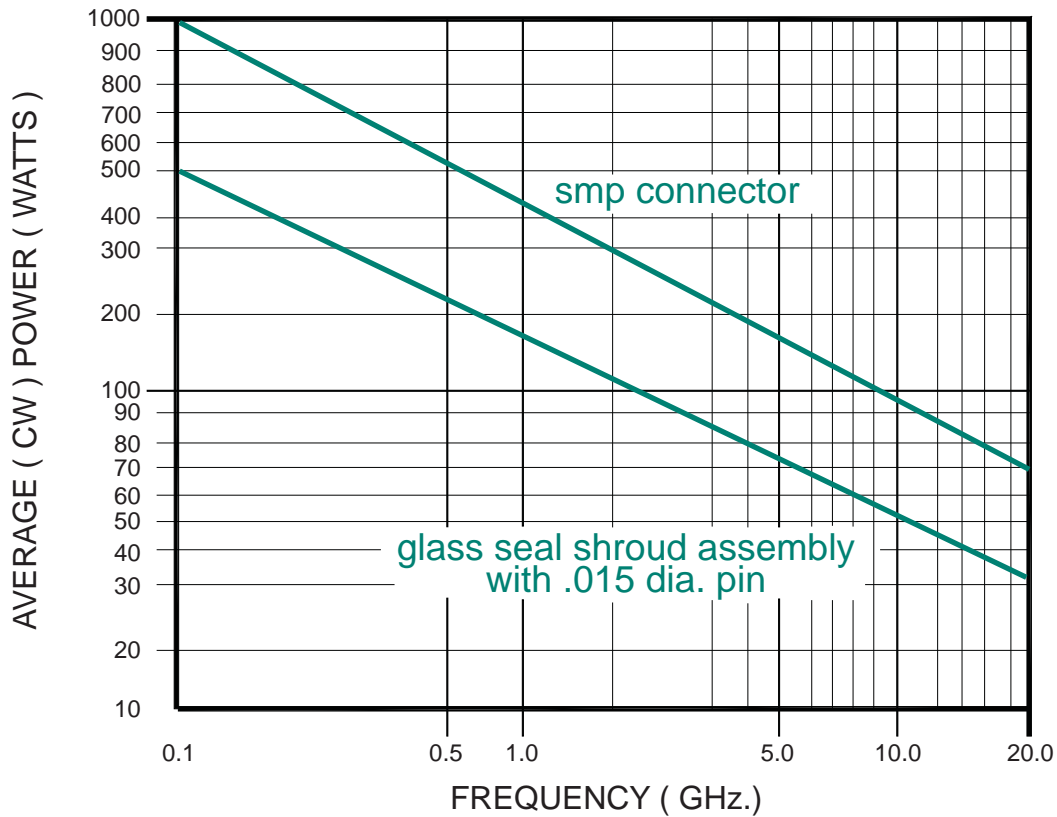
The Dynawave **SMP** series of connectors are designed to minimize MIC package size and reduce valuable mounting space. The low profile design will allow module to module mounting with a center to center dimension of .170 inches. The **SMP** cable connectors straight and right angle as shown are designed for .047 and .085 semi-rigid cables.



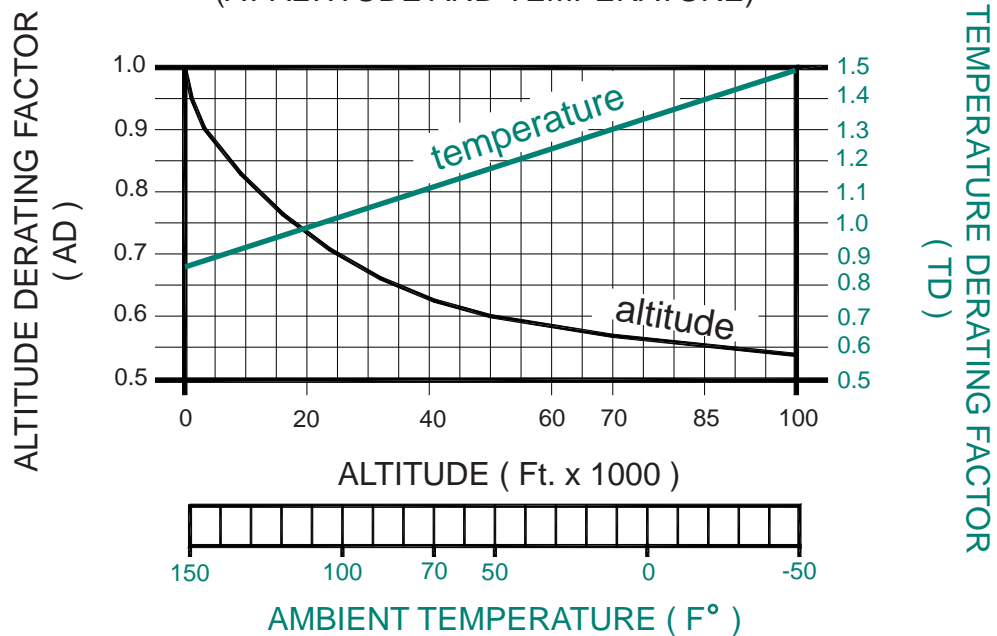
The Dynawave **SMP** 2 hole flange mount connectors or press-in shrouds are designed to reduce valuable mounting space thus allowing modules to be significantly reduced in size to maintain a low profile. The shrouds are used with a glass bead assembly to complete the coaxial interface. Hermetic Shroud designs consisting of Body, Pin and Glass are available to eliminate multi-component assemblies. The smooth bore interface allows the component engineers to mate multiple connectors at one time. Non-standard interfaces for customer unique engagement and disengagement designs are available upon request.

# smp power ratings

AVERAGE ( CW ) POWER RATING  
( AT SEA LEVEL & +100 °F TEMPERATURE )



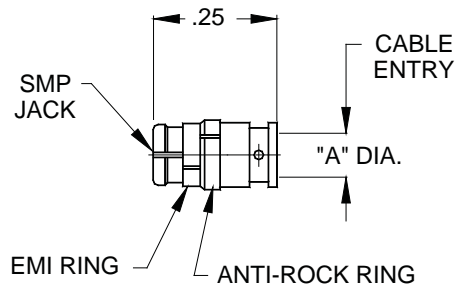
AVERAGE (CW) POWER DERATING FACTOR  
( AT ALTITUDE AND TEMPERATURE )



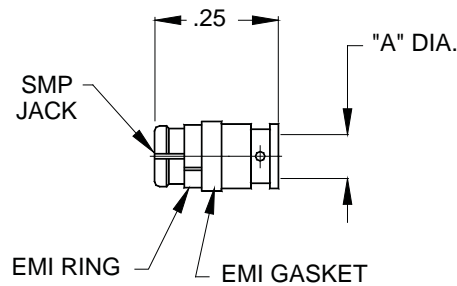
MAXIMUM OPERATING POWER = POWER RATING x AD x TD

# smp • semi rigid cable connectors

female, jack, straight

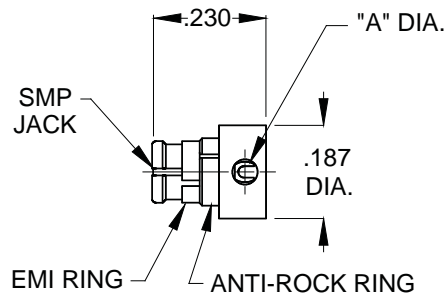


PART NUMBER	"A" DIA.	CABLE TYPE	MATERIAL TYPE	DSCC NUMBER	FREQ. RANGE
2000-3420-5400	.036 MIN.	.034 S.R.	BERYLLIUM	-----	DC - 40.0 GHz.
2000-4720-5425	.049 MIN.	.047 S.R.	BERYLLIUM	94008ZCG-2	DC - 40.0 GHz.
2000-8520-5425	.089 MIN.	RG405/U (.085)	BERYLLIUM	94008ZCG-1	DC - 40.0 GHz.



PART NUMBER	"A" DIA.	CABLE TYPE	MATERIAL TYPE	DSCC NUMBER	FREQ. RANGE
2000-3427-5400	.036 MIN.	.034 S.R.	BERYLLIUM	-----	DC - 40.0 GHz.
2000-4727-5425	.049 MIN.	.047 S.R.	BERYLLIUM	-----	DC - 40.0 GHz.
2000-8527-5425	.089 MIN.	RG405/U (.085)	BERYLLIUM	-----	DC - 40.0 GHz.

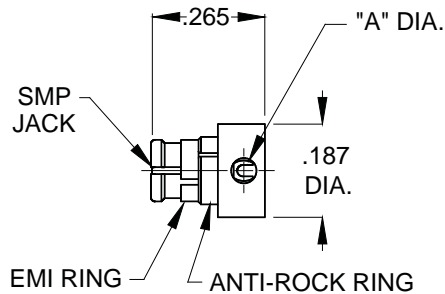
female, jack, right angle



PART NUMBER	"A" DIA.	CABLE TYPE	MATERIAL TYPE	DSCC NUMBER	FREQ. RANGE
2001-4720-5425	.049 MIN.	.047 S.R.	BERYLLIUM	-----	DC - 40.0 GHz.

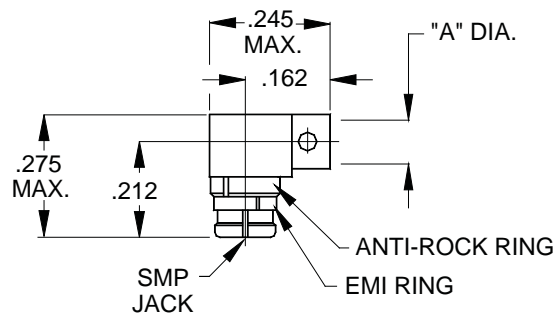
# smp • semi rigid cable connectors

female, jack, right angle



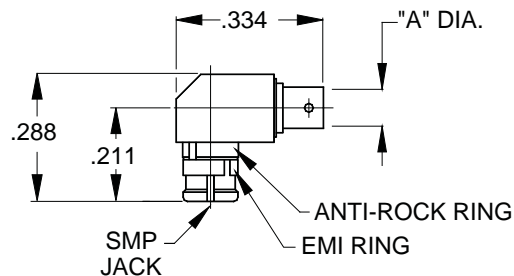
PART NUMBER	"A" DIA.	CABLE TYPE	MATERIAL TYPE	DSCC NUMBER	FREQ.RANGE
2001-4720-5400	.049 MIN.	.047 S.R.	BERYLLIUM	94008ZCG-6	DC - 12.5 GHz.
2001-8520-5425	.089 MIN.	RG405/U (.085)	BERYLLIUM	94008ZCG-5	DC - 12.5 GHz.

female, jack, right angle



PART NUMBER	"A" DIA.	CABLE TYPE	MATERIAL TYPE	DSCC NUMBER	FREQ.RANGE
2001-4720-5444	.049 MIN.	.047 S.R.	BERYLLIUM	94008ZCG-4	DC - 12.5 GHz.
2001-8520-5444	.089 MIN.	RG405/U (.085)	BERYLLIUM	94008ZCG-3	DC - 12.5 GHz.

female, jack, right angle

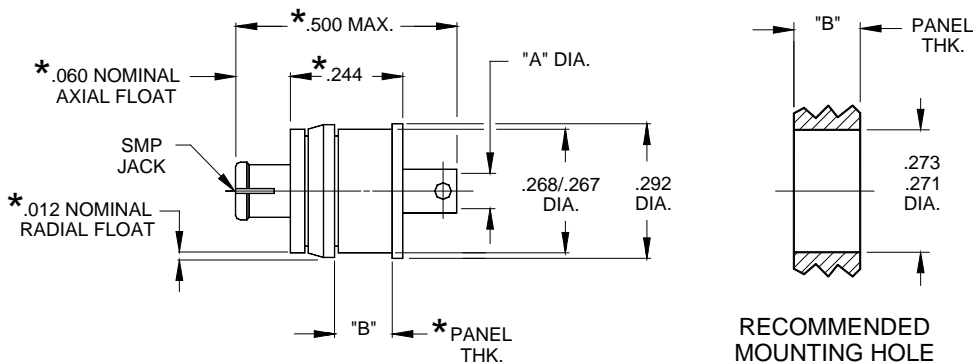


PART NUMBER	"A" DIA.	CABLE TYPE	MATERIAL TYPE	DSCC NUMBER	FREQ.RANGE
2001-4720-5429	.049 MIN.	.047 S.R.	BERYLLIUM	-----	DC - 40.0 GHz.
2001-8520-5429	.089 MIN.	RG405/U (.085)	BERYLLIUM	-----	DC - 40.0 GHz.

Specifications are subject to change without notice

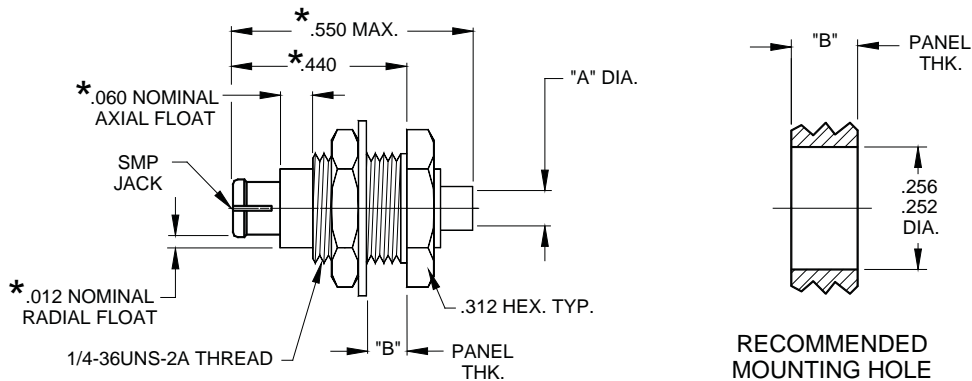
# smp • semi-rigid cable connectors

## female, jack, bulkhead, float mount



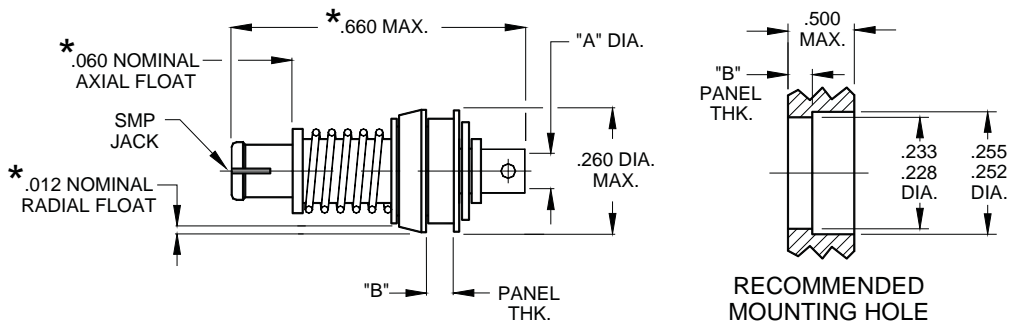
PART NUMBER	"A" DIM.	"B" DIM.	CABLE TYPE	MATERIAL TYPE	FREQUENCY RANGE
2060-4720-5400	.049 MIN.	.125	.047 SEMI-RIGID	BERYLLIUM	DC - 26.5 GHz.
2060-8520-5441	.089 MIN.	.093	RG405/U (.085)	BERYLLIUM	DC - 26.5 GHz.

## female, jack, bulkhead, float mount



PART NUMBER	"A" DIM.	"B" DIM.	CABLE TYPE	MATERIAL TYPE	FREQUENCY RANGE
2060-4720-5425	.049 MIN.	.125	.047 SEMI-RIGID	BERYLLIUM	DC - 26.5 GHz.
2060-8520-5440	.089 MIN.	.093	RG405/U (.085)	BERYLLIUM	DC - 26.5 GHz.

## female, jack, bulkhead, float mount

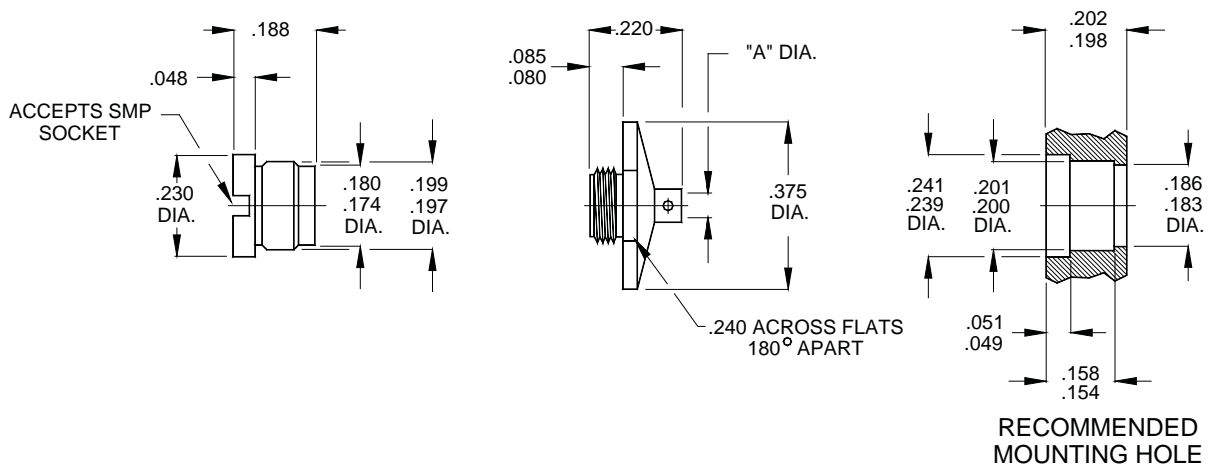


PART NUMBER	"A" DIM.	"B" DIM.	CABLE TYPE	MATERIAL TYPE	FREQUENCY RANGE
2060-4720-5455	.049 MIN.	.050	.047 SEMI-RIGID	BERYLLIUM	DC - 26.5 GHz.
2060-8520-5455	.089 MIN.	.050	RG405/U (.085)	BERYLLIUM	DC - 26.5 GHz.

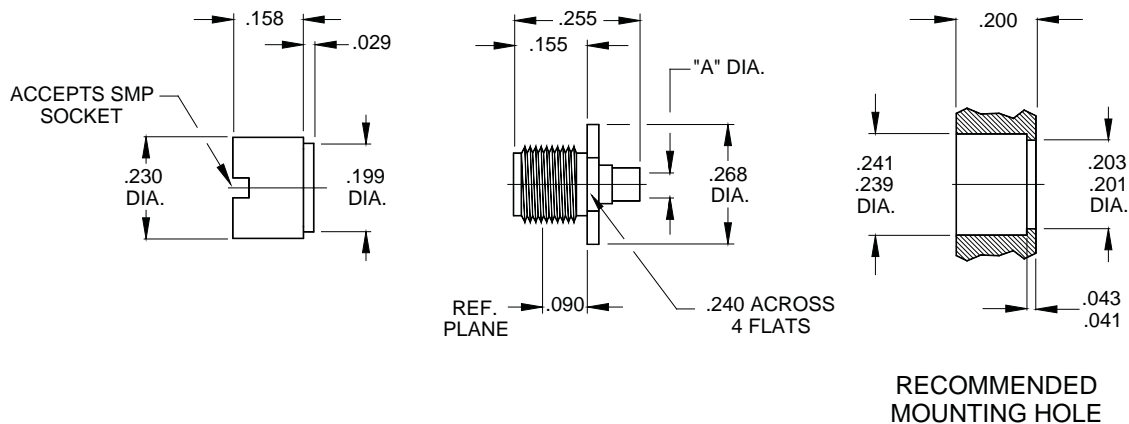


# smp • semi-rigid cable connectors

male, plug, bulkhead mount



PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2110-4721-6200	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2117-4721-6200	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2119-4721-6200	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.
2110-8521-6204	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2117-8521-6204	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2119-8521-6204	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.

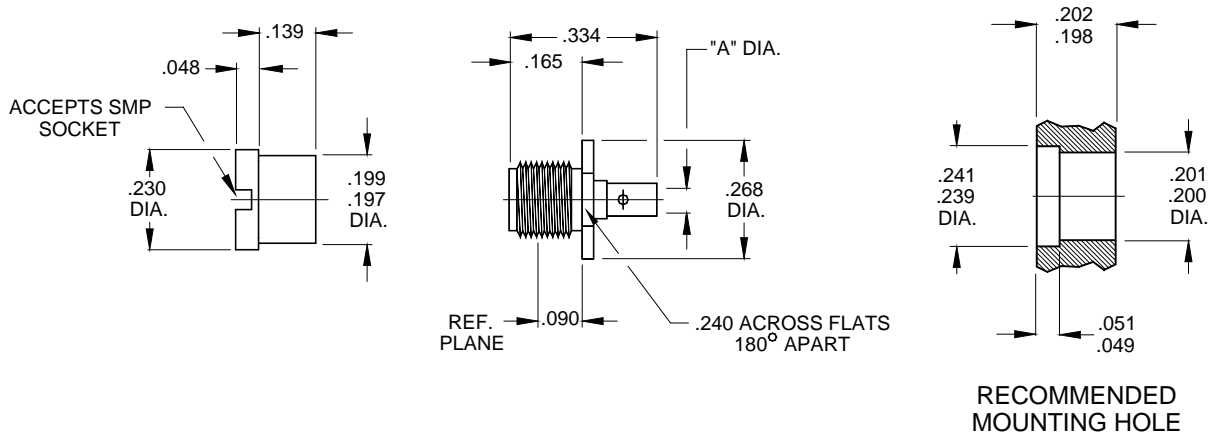


PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2110-4721-6201	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2117-4721-6201	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2119-4721-6201	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.
2110-8521-6203	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2117-8521-6203	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2119-8521-6203	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.

Specifications are subject to change without notice

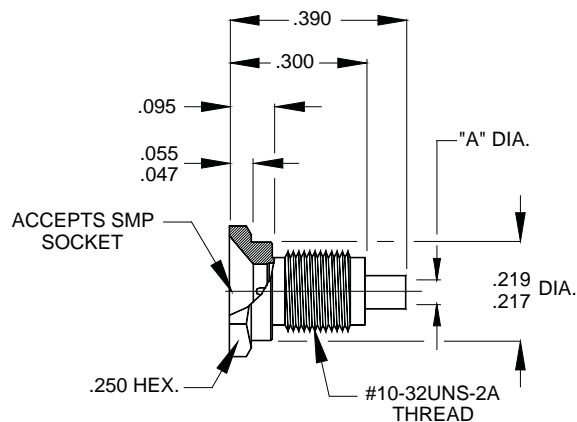
# smp • semi-rigid cable connectors

## male, plug, bulkhead mount



PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2110-4725-6200	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2117-4725-6200	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2119-4725-6200	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.
2110-8525-6202	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2117-8525-6202	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2119-8525-6202	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.

## male, plug, catchers mitt, bulkhead mount

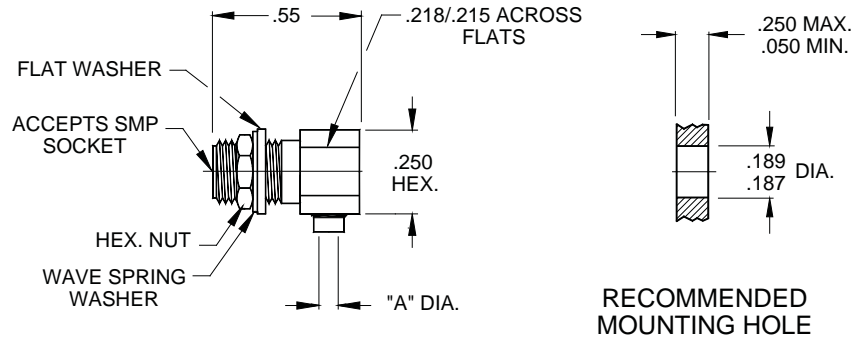


PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2130-4720-6432	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2137-4720-6432	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2139-4720-6432	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.
2130-8520-6432	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2137-8520-6432	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2139-8520-6432	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.

Specifications are subject to change without notice

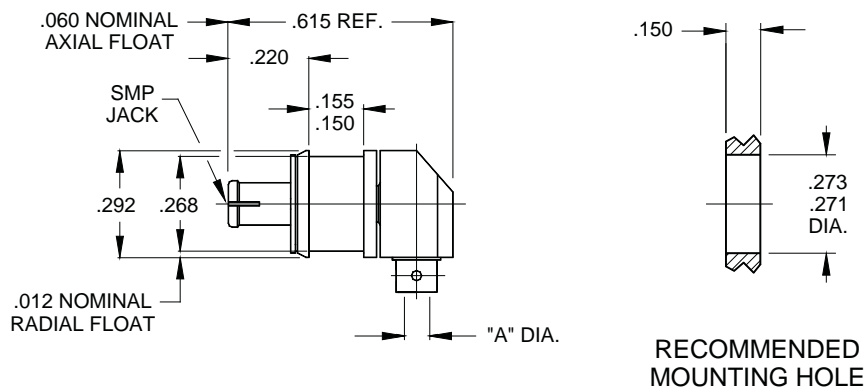
# smp • semi-rigid cable connectors

male, plug, right angle, bulkhead mount



PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2111-4720-6477	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 12.5 GHz.
2111-4727-6477	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 12.5 GHz.
2111-4729-6477	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 12.5 GHz.
2111-8520-6477	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 12.5 GHz.
2111-8527-6477	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 12.5 GHz.
2111-8529-6477	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 12.5 GHz.

female, jack, right angle, bulkhead float mount

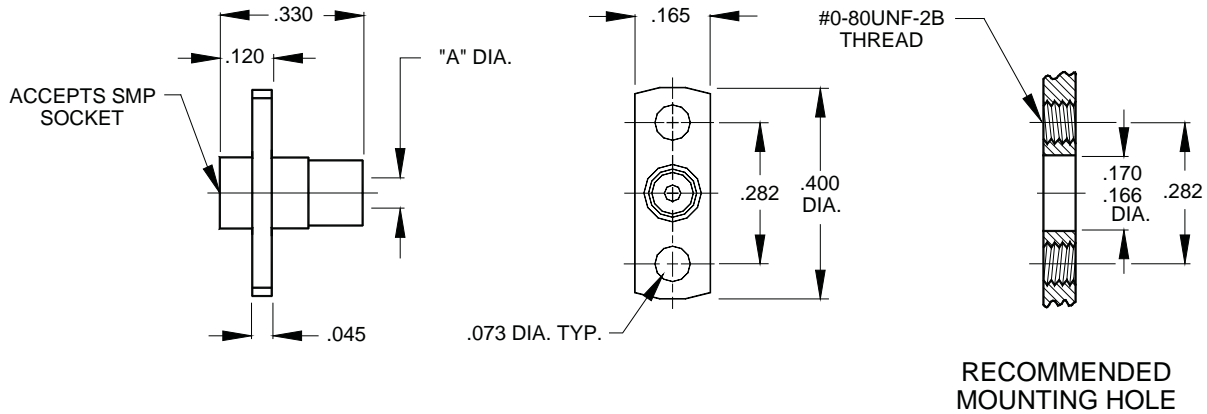


PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2061-4720-5441	.049 MIN.	.047 S.R.	N/A	BERYLLIUM	DC - 12.5 GHz.
2061-8520-5441	.089 MIN.	RG 405/U (.086)	N/A	BERYLLIUM	DC - 12.5 GHz.

Specifications are subject to change without notice

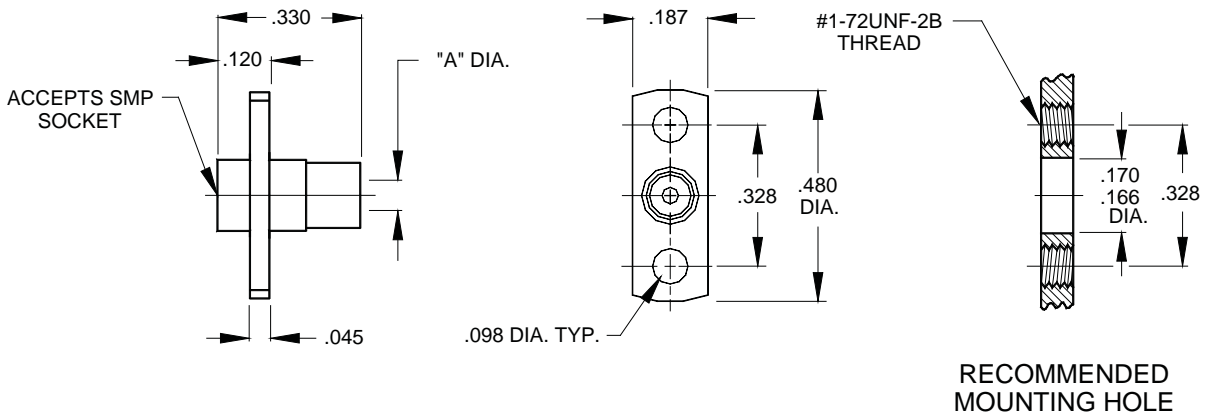
# smp • shrouds and bushings

male, plug, flange mount shroud, direct solder .282 hole spacing



PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2152-4720-6428	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2172-4720-6428	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2192-4720-6428	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.
2152-8520-6428	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2172-8520-6428	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2192-8520-6428	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.

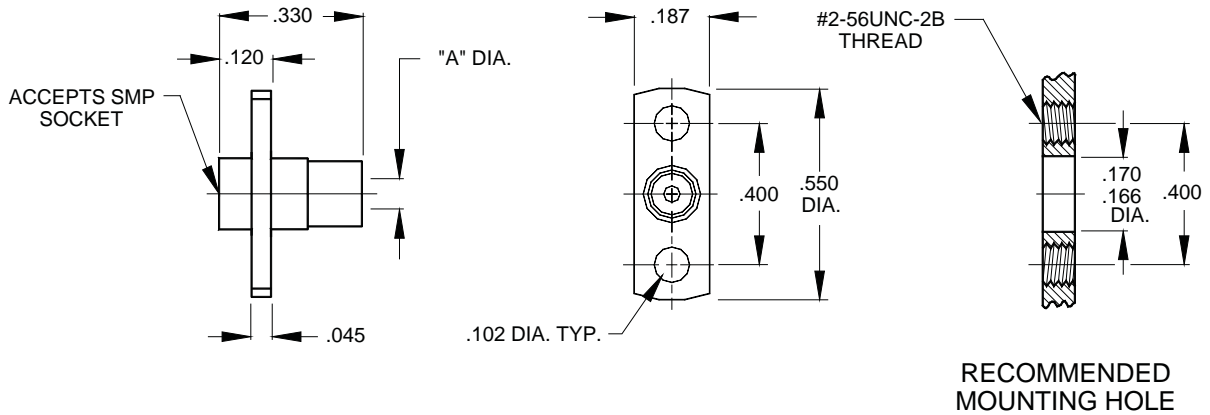
male, plug, flange mount shroud, direct solder .328 hole spacing



PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2152-4720-6432	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2172-4720-6432	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2192-4720-6432	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.
2152-8520-6432	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2172-8520-6432	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2192-8520-6432	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.

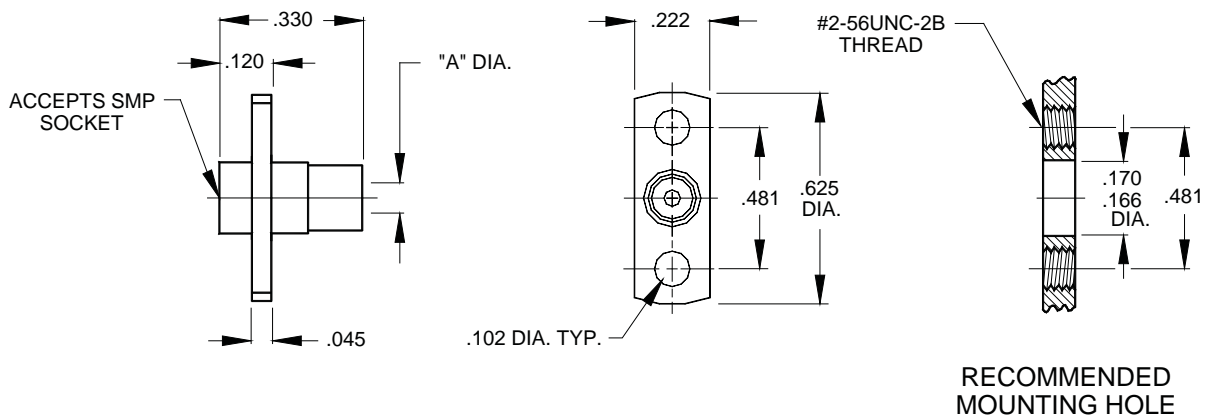
# smp • shrouds and bushings

male, plug, flange mount shroud, direct solder .400 hole spacing



PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2152-4720-6440	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2172-4720-6440	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2192-4720-6440	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.
2152-8520-6440	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2172-8520-6440	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2192-8520-6440	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.

male, plug, flange mount shroud, direct solder .481 hole spacing

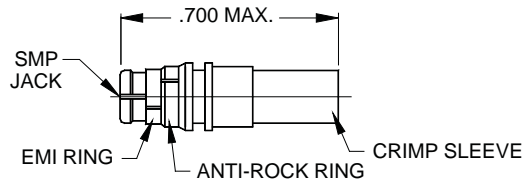


PART NUMBER	"A" DIM	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
2152-4720-6448	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2172-4720-6448	.049 MIN.	.047 S.R.	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2192-4720-6448	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.
2152-8520-6448	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2172-8520-6448	.089 MIN.	RG405/U (.085)	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.
2192-8520-6448	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.

Specifications are subject to change without notice

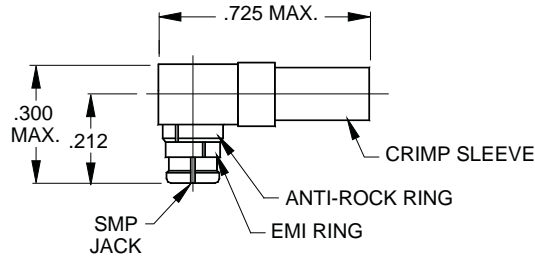
# smp • flexible cable connectors

female, jack, straight, crimp attachment



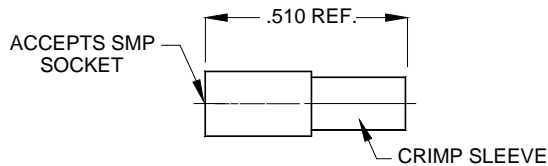
PART NUMBER	CABLE TYPE	MATERIAL TYPE	FREQUENCY RANGE
2000-1630-5435	RG 174/U, 188, 316	BERYLLIUM	DC - 4.0 GHz.
2000-7830-5435	RG 178/U, 196	BERYLLIUM	DC - 4.0 GHz.

female, jack, right angle, crimp attachment



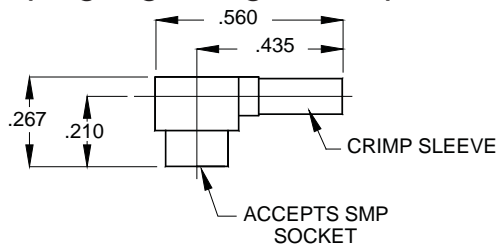
PART NUMBER	CABLE TYPE	MATERIAL TYPE	FREQUENCY RANGE
2001-1630-5444	RG 174/U, 188, 316	BERYLLIUM	DC - 4.0 GHz.
2001-7830-5444	RG 178/U, 196	BERYLLIUM	DC - 4.0 GHz.

male, plug, straight, crimp attachment



PART NUMBER	CABLE TYPE	FREQUENCY RANGE
2100-1630-5435	RG 174/U, 188, 316	DC - 4.0 GHz.
2100-7830-5435	RG 178/U, 196	DC - 4.0 GHz.

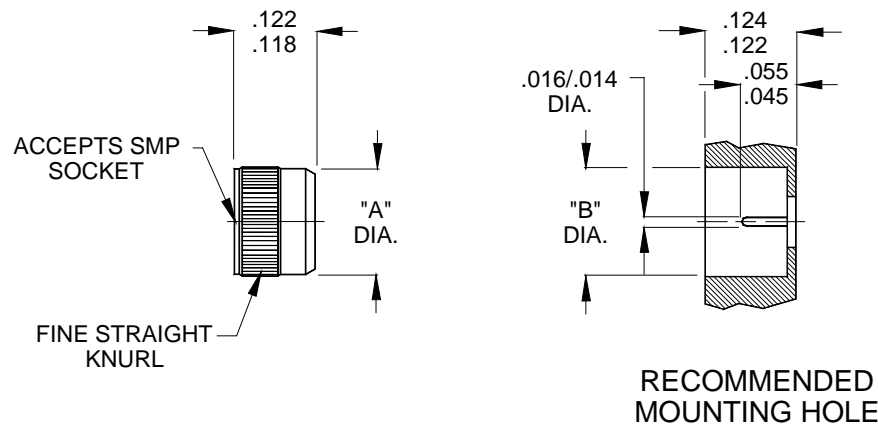
male, plug, right angle, crimp attachment



PART NUMBER	CABLE TYPE	FREQUENCY RANGE
2101-1630-5435	RG 174/U, 188, 316	DC - 4.0 GHz.
2101-7830-5435	RG 178/U, 196	DC - 4.0 GHz.

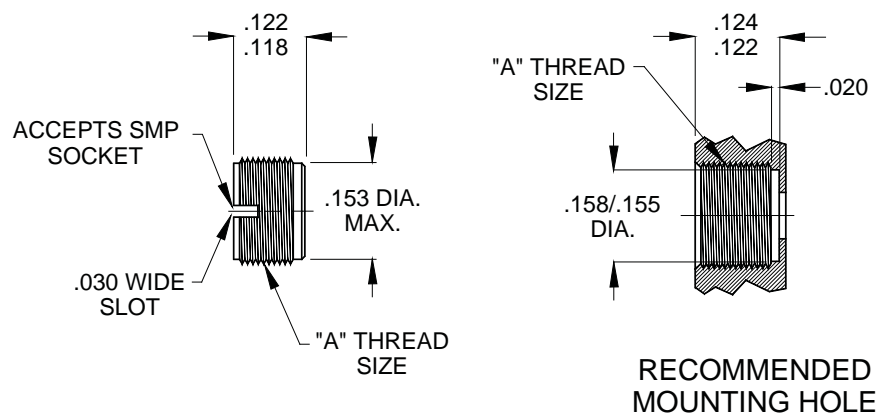
# smp • shrouds and bushings

## press-in shroud



PART NUMBER	"A" DIA.	"B" DIA.	MATERIAL TYPE	ENGAGEMENT TYPE	PRESS TOOL
9-21011	.155/.153	.151/.150	STAINLESS STEEL	FULL DETENT	9-20142-00
9-21000	.175/.173	.171/.170	STAINLESS STEEL	FULL DETENT	9-20142-00
9-21711	.155/.153	.151/.150	STAINLESS STEEL	LIMITED DETENT	9-20142-07
9-21718	.175/.173	.171/.170	STAINLESS STEEL	LIMITED DETENT	9-20142-07
9-21911	.155/.153	.151/.150	STAINLESS STEEL	SMOOTH BORE	9-20141-09
9-21918	.175/.173	.171/.170	STAINLESS STEEL	SMOOTH BORE	9-20142-09

## thread-in shroud

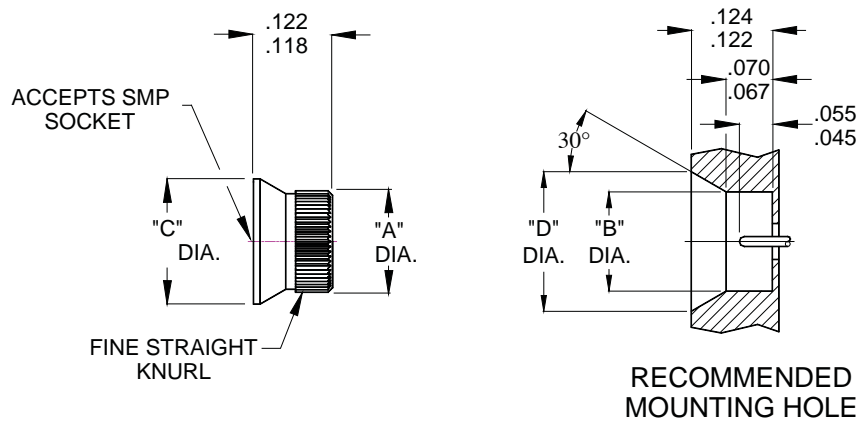


PART NUMBER	"A" THREAD SIZE	MATERIAL TYPE	ENGAGEMENT TYPE	TORQUE TOOL
9-21015	#10-48UNS-2A	STAINLESS STEEL	FULL DETENT	9-20164-00
9-21016	#10-36UNS-2A	STAINLESS STEEL	FULL DETENT	9-20164-00
9-21717	#10-48UNS-2A	STAINLESS STEEL	LIMITED DETENT	9-20164-07
9-21719	#10-36UNS-2A	STAINLESS STEEL	LIMITED DETENT	9-20164-07
9-21917	#10-48UNS-2A	STAINLESS STEEL	SMOOTH BORE	9-20164-09
9-21920	#10-36UNS-2A	STAINLESS STEEL	SMOOTH BORE	9-20164-09

Specifications are subject to change without notice

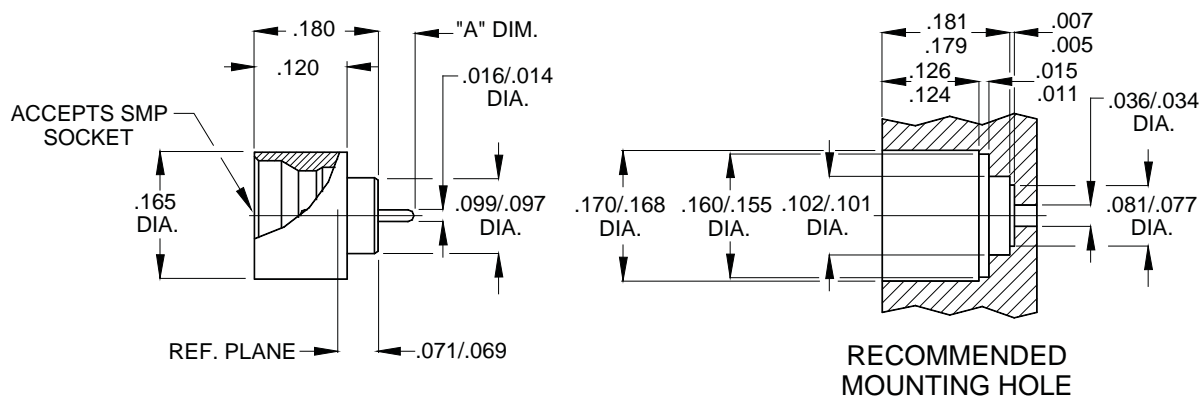
# smp • shrouds and bushings

## catchers mit press-in shroud



PART NUMBER	"A" DIA.	"B" DIA.	"C" DIA.	"D" DIA.	ENGAGEMENT TYPE	PRESS TOOL
9-21088	.155/.153	.151/.150	.195/.190	.212 REF.	FULL DETENT	9-20142-00
9-21087	.175/.173	.171/.170	.215/.210	.231 REF.	FULL DETENT	9-20142-00
9-21705	.155/.153	.151/.150	.195/.190	.212 REF.	LIMITED DETENT	9-20142-07
9-21706	.175/.173	.171/.170	.215/.210	.231 REF.	LIMITED DETENT	9-20142-07
9-21999	.155/.153	.151/.150	.195/.190	.212 REF.	SMOOTH BORE	9-20141-09
9-21998	.175/.173	.171/.170	.215/.210	.231 REF.	SMOOTH BORE	9-20142-09

## hermetic solder-in shroud

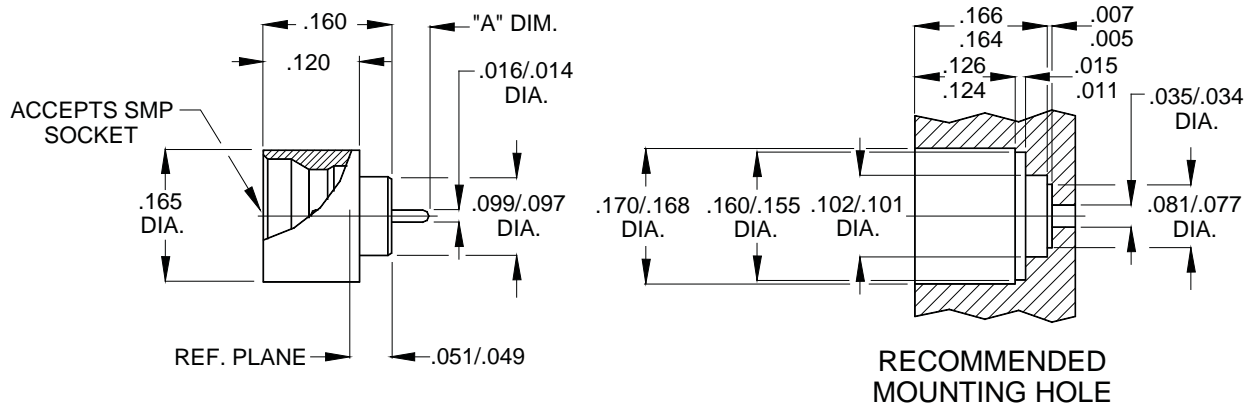


PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2140-0435-7409	.095/.085	FULL DETENT	KOVAR	DC - 39.0 GHz.
2140-0435-7407	.075/.065	FULL DETENT	KOVAR	DC - 39.0 GHz.
2147-0435-7409	.095/.085	LIMITED DETENT	KOVAR	DC - 39.0 GHz.
2147-0435-7407	.075/.065	LIMITED DETENT	KOVAR	DC - 39.0 GHz.
2149-0435-7409	.095/.085	SMOOTH BORE	KOVAR	DC - 39.0 GHz.
2149-0435-7407	.075/.065	SMOOTH BORE	KOVAR	DC - 39.0 GHz.



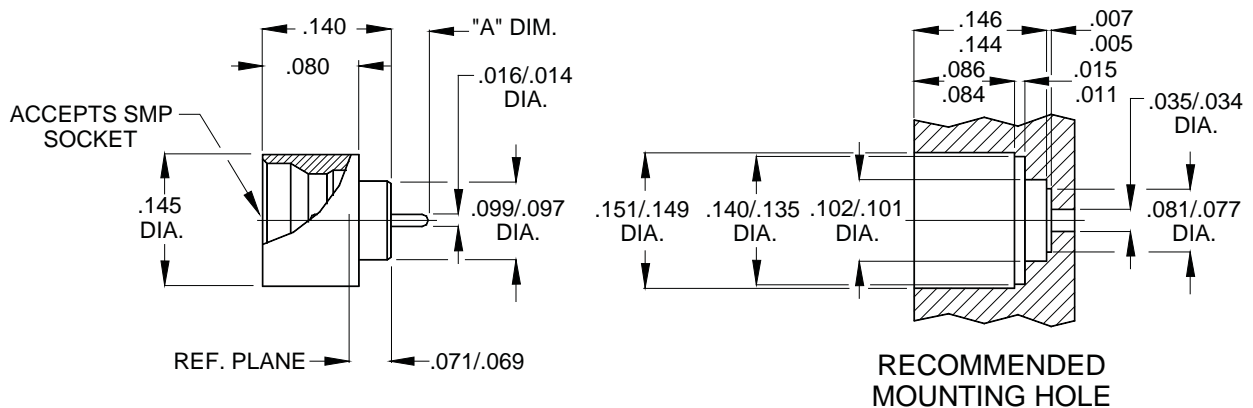
# smp • shrouds and bushings

## hermetic solder-in shroud



PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2140-0435-7400	.090/.080	FULL DETENT	KOVAR	DC - 39.0 GHz.
2140-0435-7408	.080/.070	FULL DETENT	KOVAR	DC - 39.0 GHz.
2140-0435-7411	.095/.085	FULL DETENT	KOVAR	DC - 39.0 GHz.
2147-0435-7400	.090/.080	LIMITED DETENT	KOVAR	DC - 39.0 GHz.
2147-0435-7408	.080/.070	LIMITED DETENT	KOVAR	DC - 39.0 GHz.
2147-0435-7411	.095/.085	LIMITED DETENT	KOVAR	DC - 39.0 GHz.
2149-0435-7400	.090/.080	SMOOTH BORE	KOVAR	DC - 39.0 GHz.
2149-0435-7408	.080/.070	SMOOTH BORE	KOVAR	DC - 39.0 GHz.
2149-0435-7411	.095/.085	SMOOTH BORE	KOVAR	DC - 39.0 GHz.

## hermetic solder-in shroud

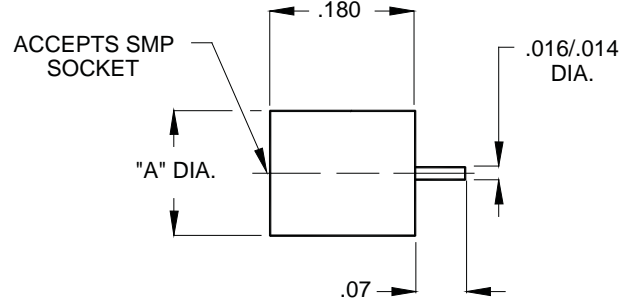


PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2140-0434-7437	.080/.070	FULL DETENT	KOVAR	DC - 39.0 GHz.
2147-0434-7437	.080/.070	LIMITED DETENT	KOVAR	DC - 39.0 GHz.
2149-0434-7437	.080/.070	SMOOTH BORE	KOVAR	DC - 39.0 GHz.

Specifications are subject to change without notice

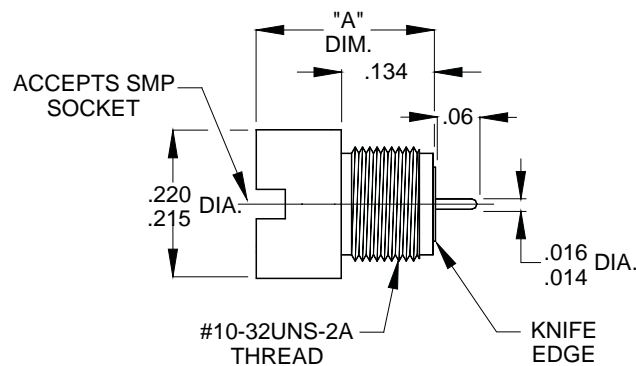
# smp • shrouds and bushings

male, plug, solder-in, hermetic shroud



PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2140-0434-6402	.152/.150	FULL DETENT	STAINLESS STEEL	DC - 39.0 GHz.
2140-0434-6403	.170/.168	FULL DETENT	STAINLESS STEEL	DC - 39.0 GHz.
2147-0434-6402	.152/.150	LIMITED DETENT	STAINLESS STEEL	DC - 39.0 GHz.
2147-0434-6403	.170/.168	LIMITED DETENT	STAINLESS STEEL	DC - 39.0 GHz.
2149-0434-6402	.152/.150	SMOOTH BORE	STAINLESS STEEL	DC - 39.0 GHz.
2149-0434-6403	.170/.168	SMOOTH BORE	STAINLESS STEEL	DC - 39.0 GHz.

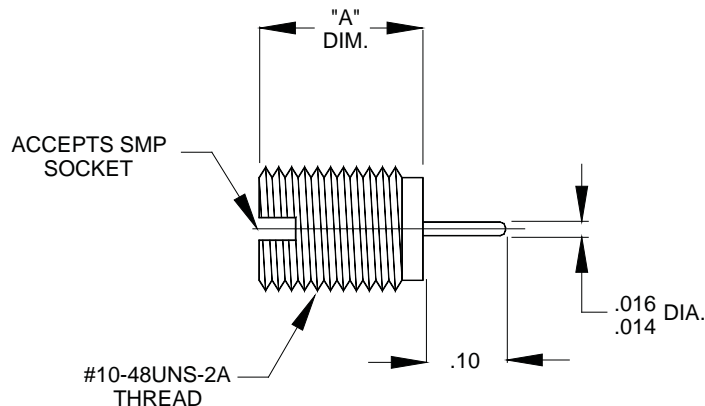
male, plug, thread-in, hermetic shroud



PART NUMBER	"A" DIM.	ENGAGEMENT	MATERIAL TYPE	FREQ. RANGE	TORQUE TOOL
2135-0431-6436	.259	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.	9-20164-00
2137-0431-6436	.259	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.	9-21064-07
2139-0431-6436	.259	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.	9-20164-09

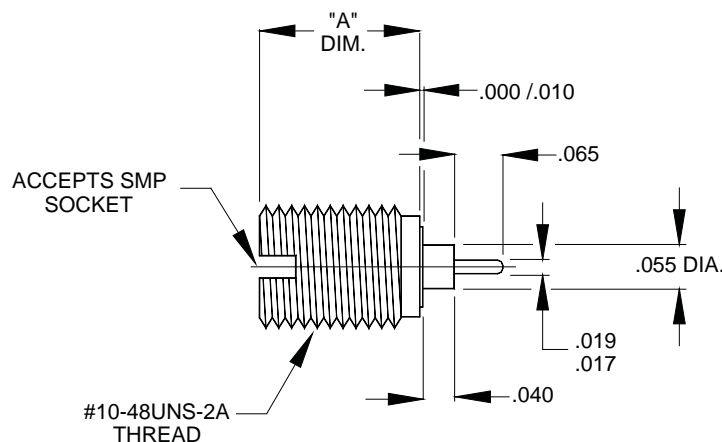
# smp • shrouds and bushings

male, plug, thread-in, hermetic shroud



PART NUMBER	"A" DIM.	ENGAGEMENT	MATERIAL TYPE	FREQ. RANGE	TORQUE TOOL
2130-0430-6401	.190	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-00
2137-0430-6401	.190	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-21064-07
2139-0430-6401	.190	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-09

male, plug, thread-in, non-hermetic shroud

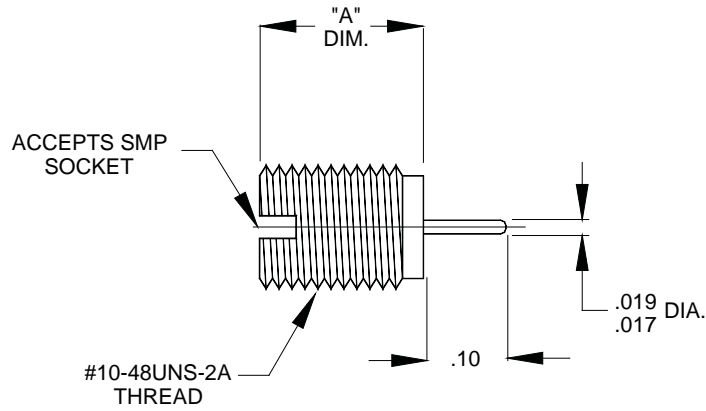


PART NUMBER	"A" DIM.	ENGAGEMENT	MATERIAL TYPE	FREQ. RANGE	TORQUE TOOL
2130-0232-6218	.190	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-00
2137-0232-6218	.190	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-21064-07
2139-0232-6218	.190	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-09

Specifications are subject to change without notice

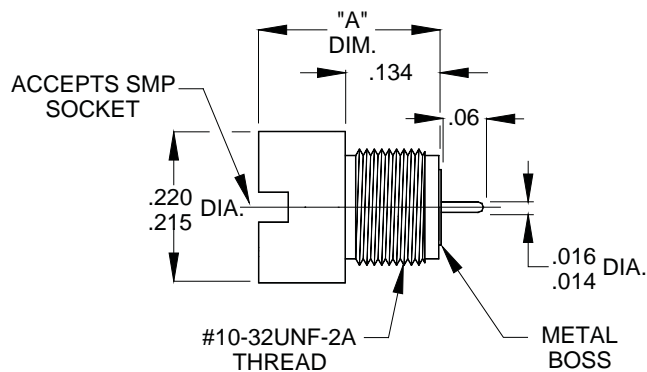
# smp • shrouds and bushings

male, plug, thread-in, non-hermetic shroud



PART NUMBER	"A" DIM.	ENGAGEMENT	MATERIAL TYPE	FREQ. RANGE	TORQUE TOOL
2130-0031-6200	.190	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-00
2137-0031-6200	.190	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-21064-07
2139-0031-6200	.190	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-09

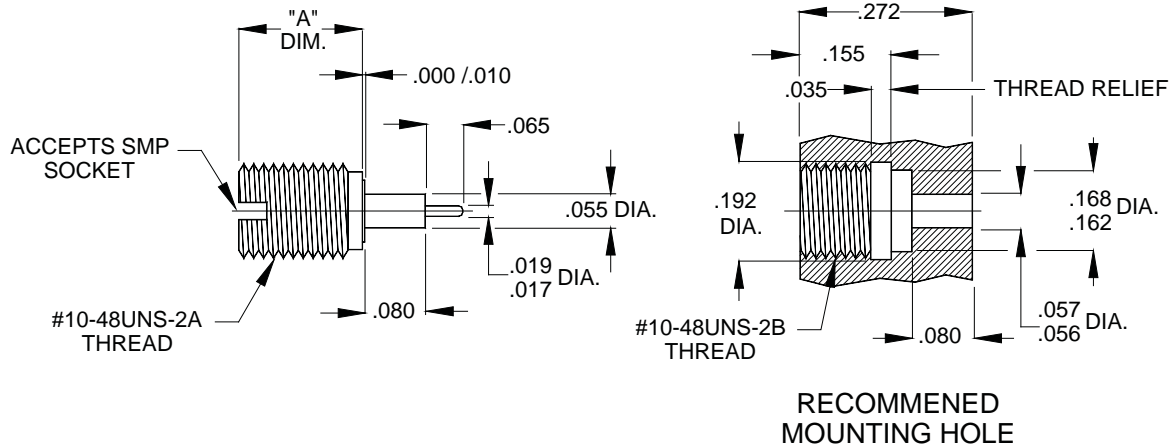
male, plug, thread-in, non-hermetic shroud



PART NUMBER	"A" DIM.	ENGAGEMENT	MATERIAL TYPE	FREQ. RANGE	TORQUE TOOL
2135-0032-6200	.259	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-00
2137-0032-6201	.259	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-21064-07
2139-0032-6202	.259	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-09

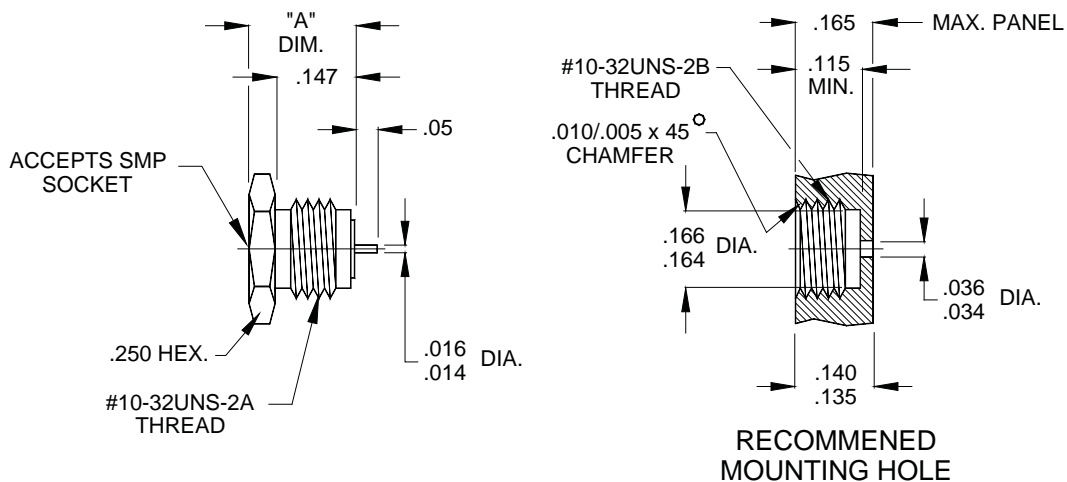
# smp • shrouds and bushings

male, plug, thread-in, non-hermetic shroud



PART NUMBER	"A" DIM.	ENGAGEMENT	MATERIAL TYPE	FREQ. RANGE	TORQUE TOOL
2130-0032-6251	.190	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-00
2137-0032-6251	.190	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.	9-21064-07
2139-0032-6251	.190	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.	9-20164-09

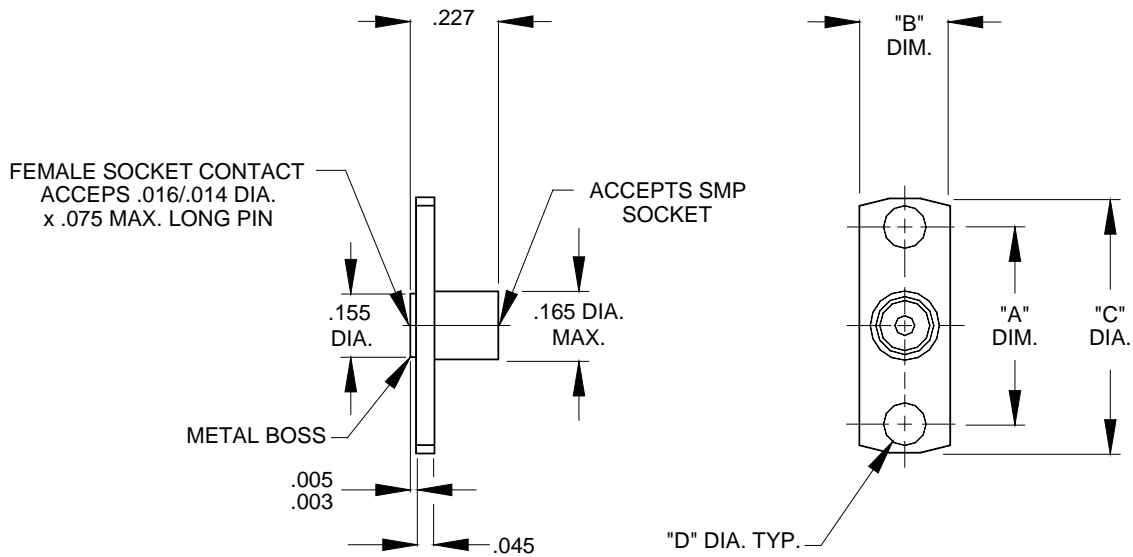
male, plug, thread-in, non-hermetic shroud



PART NUMBER	"A" DIM.	ENGAGEMENT	MATERIAL TYPE	FREQ. RANGE	TORQUE TOOL
2130-0032-6232	.195	FULL DETENT	STAINLESS STEEL	DC - 26.5 GHz.	9-96002
2137-0032-6232	.195	LIMITED DETENT	STAINLESS STEEL	DC - 26.5 GHz.	9-96002
2139-0032-6232	.195	SMOOTH BORE	STAINLESS STEEL	DC - 26.5 GHz.	9-96002

# smp • shrouds and bushings

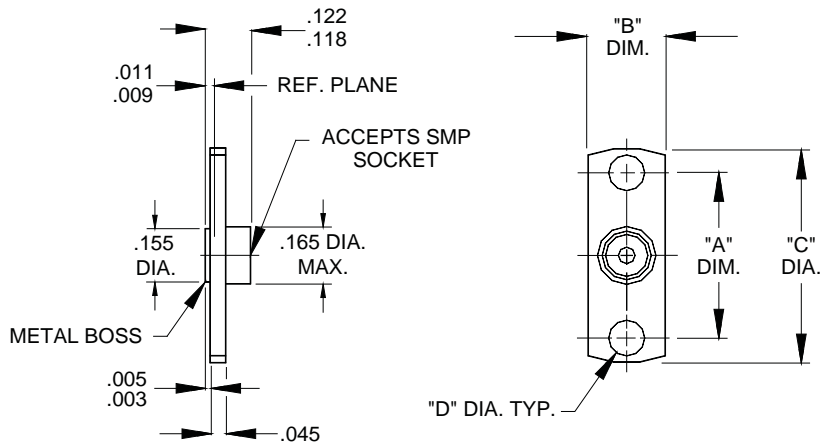
male, plug, flange mount, field replaceable



PART NUMBER	"A" DIM.	"B" DIM.	"C" DIA.	"D" DIA.	ENGAGEMENT TYPE	FREQUENCY RANGE
2152-0881-6228	.282	.165	.400	.073	FULL DETENT	DC - 26.5 GHz.
2152-0881-6232	.328	.187	.480	.098	FULL DETENT	DC - 26.5 GHz.
2152-0881-6240	.400	.187	.550	.102	FULL DETENT	DC - 26.5 GHz.
2152-0881-6248	.481	.222	.625	.102	FULL DETENT	DC - 26.5 GHz.
2172-0881-6228	.282	.165	.400	.073	LIMITED DETENT	DC - 26.5 GHz.
2172-0881-6232	.328	.187	.480	.098	LIMITED DETENT	DC - 26.5 GHz.
2172-0881-6240	.400	.187	.550	.102	LIMITED DETENT	DC - 26.5 GHz.
2172-0881-6248	.481	.222	.625	.102	LIMITED DETENT	DC - 26.5 GHz.
2192-0881-6228	.282	.165	.400	.073	SMOOTH BORE	DC - 26.5 GHz.
2192-0881-6232	.328	.187	.480	.098	SMOOTH BORE	DC - 26.5 GHz.
2192-0881-6240	.400	.187	.550	.102	SMOOTH BORE	DC - 26.5 GHz.
2192-0881-6248	.481	.222	.625	.102	SMOOTH BORE	DC - 26.5 GHz.

# smp • shrouds and bushings

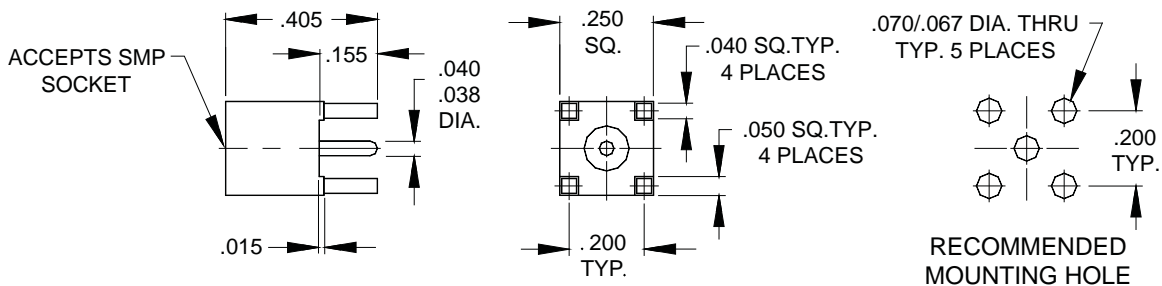
## flange mount shroud with metal boss



CENTERING TOOL FOR ALL DETENTS : 9-21040

PART NUMBER	"A" DIM.	"B" DIM.	"C" DIA.	"D" DIA.	ENGAGEMENT TYPE	DSCC PART NUMBER
9-21801	.282	.165	.400	.073	FULL DETENT	94007ZSP-5
9-21802	.328	.187	.480	.098	FULL DETENT	94007ZSP-3
9-21803	.400	.187	.550	.102	FULL DETENT	-----
9-21804	.481	.222	.625	.102	FULL DETENT	94007ZSP-4
9-21701	.282	.165	.400	.073	LIMITED DETENT	94007ZSP-5L
9-21702	.328	.187	.480	.098	LIMITED DETENT	94007ZSP-3L
9-21703	.400	.187	.550	.102	LIMITED DETENT	-----
9-21720	.481	.222	.625	.102	LIMITED DETENT	94007ZSP-4L
9-21901	.282	.165	.400	.073	SMOOTH BORE	94007ZSP-5S
9-21902	.328	.187	.480	.098	SMOOTH BORE	94007ZSP-3S
9-21903	.400	.187	.550	.102	SMOOTH BORE	-----
9-21908	.481	.222	.625	.102	SMOOTH BORE	94007ZSP-4S

## printed circuit board thru hole mount

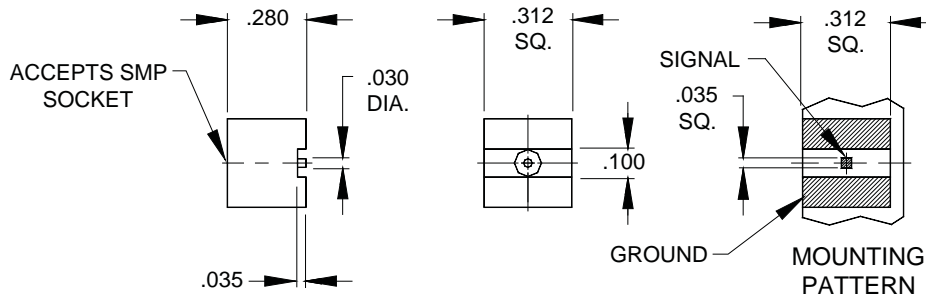


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2120-0031-2700	FULL DETENT	BRASS	DC - 12.5 GHz.
2127-0031-2700	LIMITED DETENT	BRASS	DC - 12.5 GHz.
2129-0031-2700	SMOOTH BORE	BRASS	DC - 12.5 GHz.

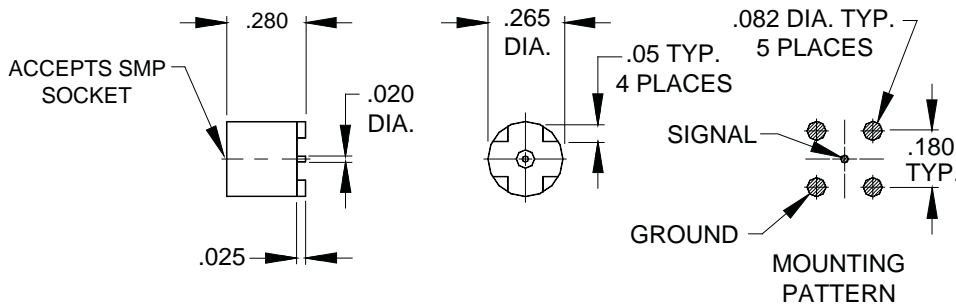
Specifications are subject to change without notice

# smp • shrouds and bushings

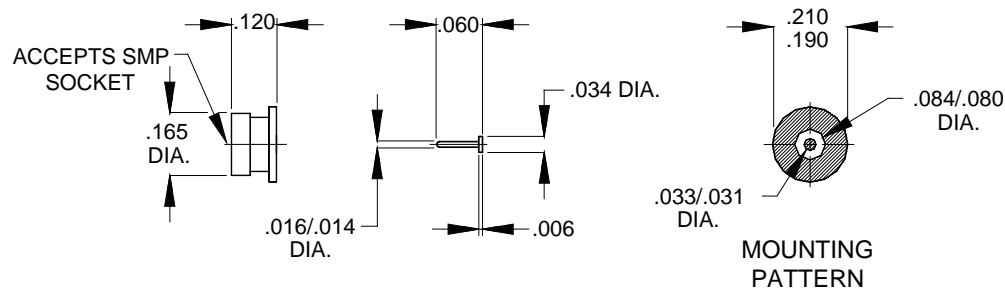
printed circuit board surface mount



PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2120-0031-2321	FULL DETENT	BRASS	DC - 12.5 GHz.
2127-0031-2321	LIMITED DETENT	BRASS	DC - 12.5 GHz.
2129-0031-2321	SMOOTH BORE	BRASS	DC - 12.5 GHz.



PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2120-0031-2320	FULL DETENT	BRASS	DC - 12.5 GHz.
2127-0031-2320	LIMITED DETENT	BRASS	DC - 12.5 GHz.
2129-0031-2320	SMOOTH BORE	BRASS	DC - 12.5 GHz.

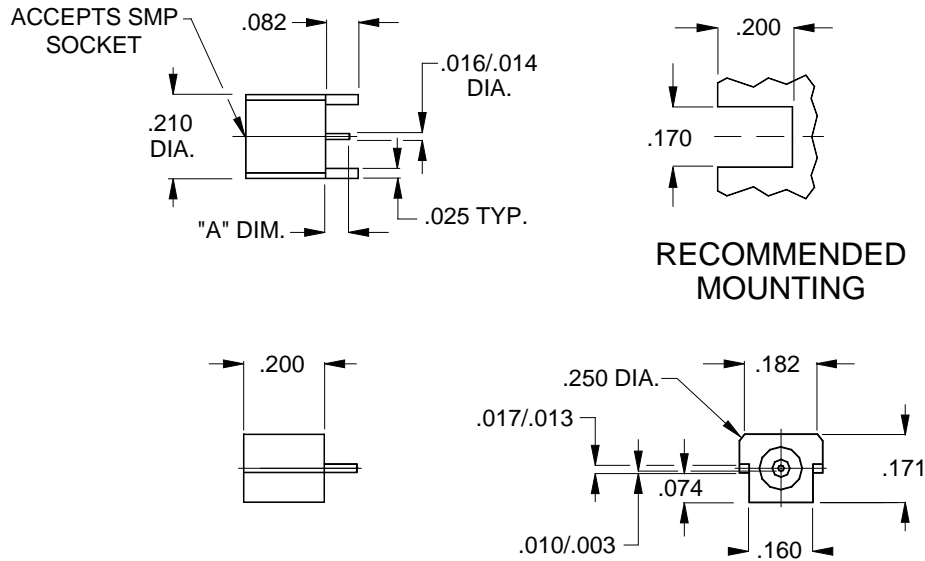


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE	CENTER TOOL
2120-0330-6406	FULL DETENT	BRASS	DC - 12.5 GHz.	9-21037-00
2127-0330-6406	LIMITED DETENT	BRASS	DC - 12.5 GHz.	9-21037-07
2129-0330-6406	SMOOTH BORE	BRASS	DC - 12.5 GHz.	9-21037-09

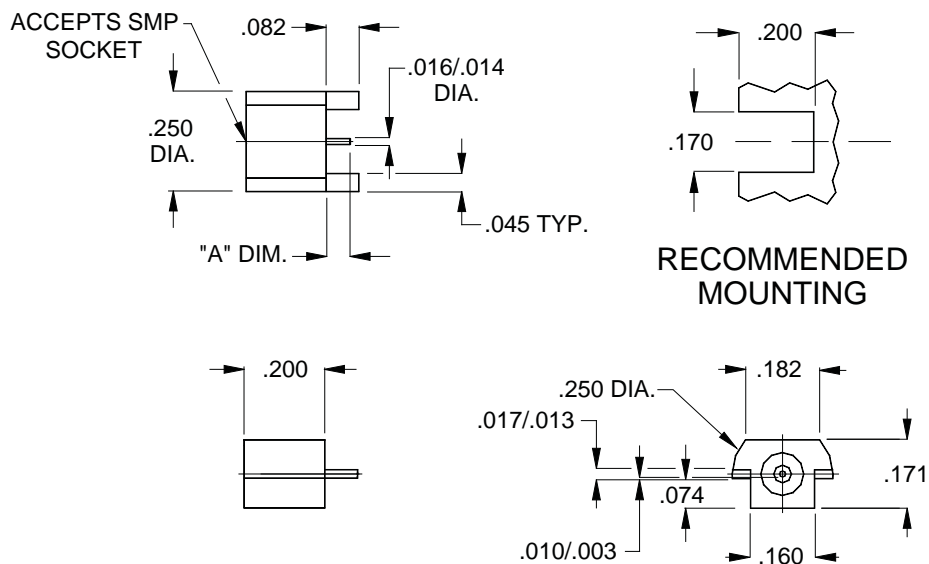


# smp • shrouds and bushings

printed circuit board edge mount



PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2120-0232-6400	.082	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.
2127-0232-6400	.082	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.
2129-0232-6400	.082	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.

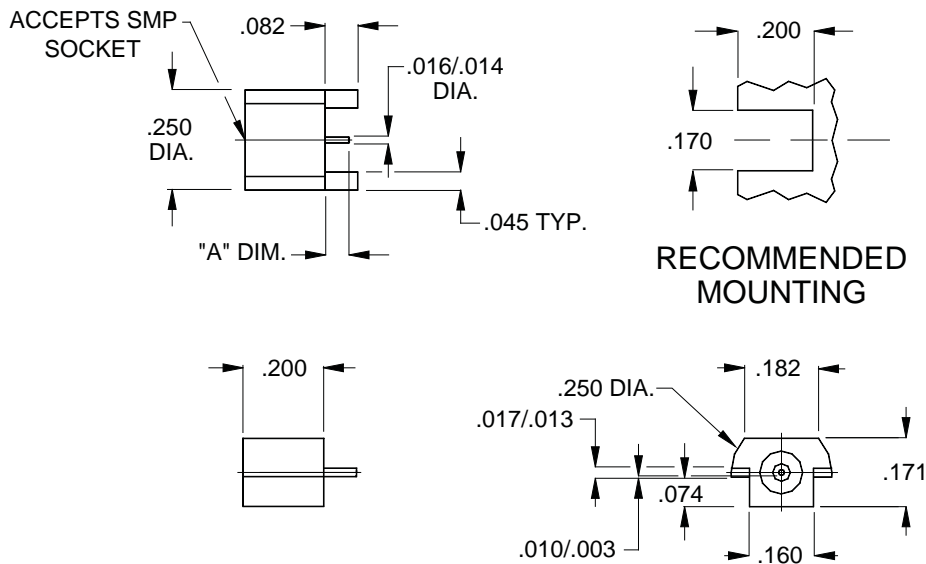


PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2120-0232-6418	.082	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.
2127-0232-6418	.082	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.
2129-0232-6418	.082	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.

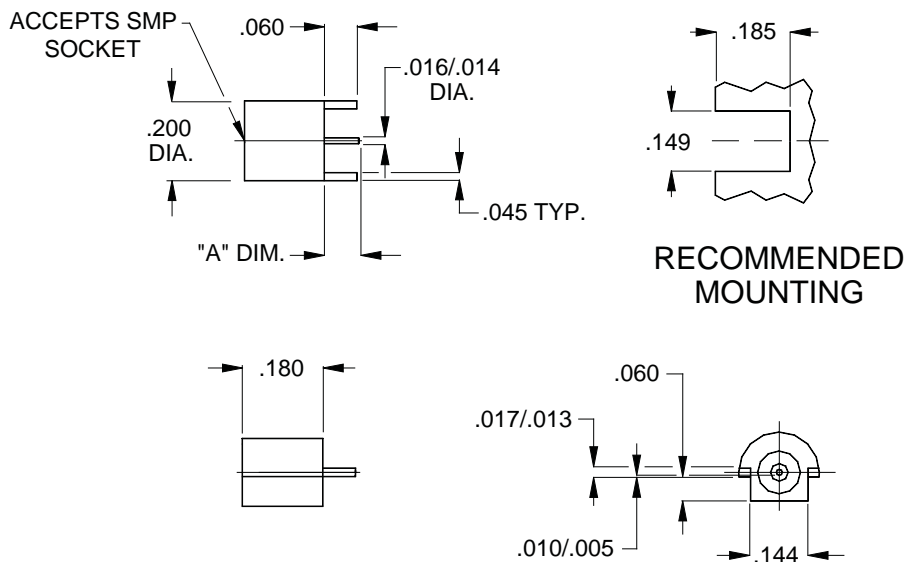
Specifications are subject to change without notice

# smp • shrouds and bushings

printed circuit board edge mount, hermetically sealed



PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2120-0431-6418	.082	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.
2127-0431-6418	.082	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.
2129-0431-6418	.082	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.

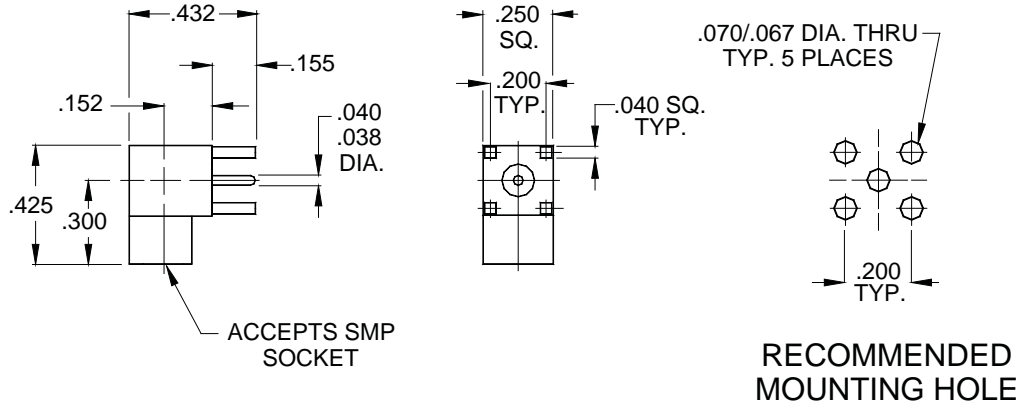


PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2120-0431-6400	.060	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.
2127-0431-6400	.060	LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.
2129-0431-6400	.060	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.

Specifications are subject to change without notice

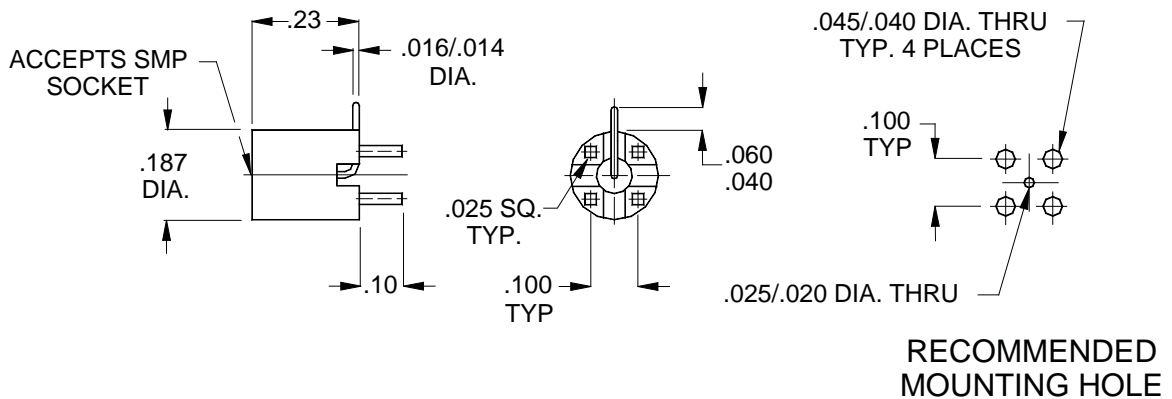
# smp • shrouds and bushings

printed circuit board thru hole mount, right angle



PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2121-0031-2700	FULL DETENT	BRASS	DC - 6.0 GHz.
2121-0031-2707	LIMITED DETENT	BRASS	DC - 6.0 GHz.
2121-0031-2709	SMOOTH BORE	BRASS	DC - 6.0 GHz.

printed circuit board, surface mount, right angle, hermetically sealed

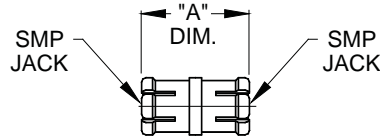


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
2121-0431-6400	FULL DETENT	STAINLESS STEEL	DC - 6.0 GHz.
2121-0431-6407	LIMITED DETENT	STAINLESS STEEL	DC - 6.0 GHz.
2121-0431-6409	SMOOTH BORE	STAINLESS STEEL	DC - 6.0 GHz.

Specifications are subject to change without notice

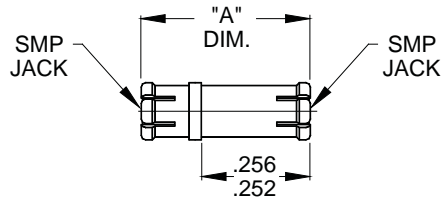
# smp • in-series adapters

female, jack to female, jack, straight



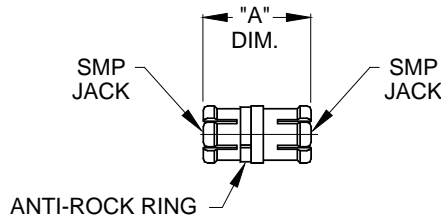
PART NUMBER	"A" DIM.	DSCC PART NUMBER	MATERIAL TYPE	FREQUENCY RANGE
1100-2020-5450	.2555 / .2535	94007ZCG-1	BERYLLIUM	DC - 40.0 GHz.
1100-2020-5456	.2255 / .2225	-----	BERYLLIUM	DC - 40.0 GHz.
1100-2020-5411	.241 / .239	-----	BERYLLIUM	DC - 40.0 GHz.
1100-2020-5401	.285	-----	BERYLLIUM	DC - 40.0 GHz.
1100-2020-5407	.414	-----	BERYLLIUM	DC - 40.0 GHz.
1100-2020-5426	.826	-----	BERYLLIUM	DC - 40.0 GHz.
1100-200-5498	1.000	-----	BERYLLIUM	DC - 40.0 GHz.
1100-2020-5497	1.427	-----	BERYLLIUM	DC - 40.0 GHz.

female, jack to female, jack, straight



PART NUMBER	"A" DIM.	DSCC PART NUMBER	MATERIAL TYPE	FREQUENCY RANGE
1100-2020-5495	.395	94007ZCG-2	BERYLLIUM	DC - 40.0 GHz.

female, jack to female, jack, straight

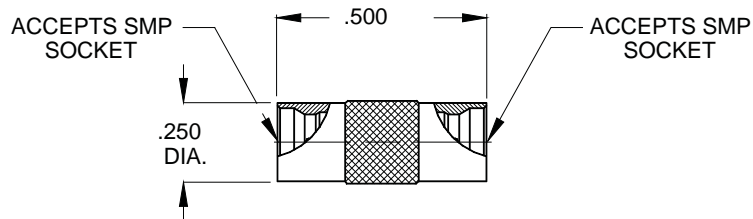


PART NUMBER	"A" DIM.	DSCC PART NUMBER	MATERIAL TYPE	FREQUENCY RANGE
1100-2020-5455	.2555 / .2535	-----	BERYLLIUM	DC - 40.0 GHz.

Specifications are subject to change without notice

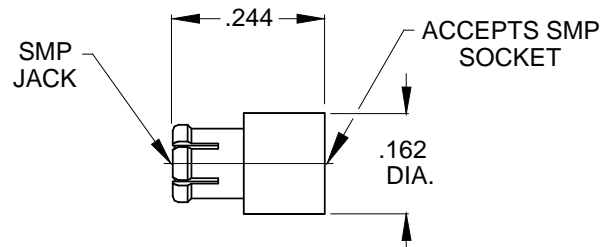
# smp • in-series adapters

male, plug to male, plug, straight



PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
1100-2121-6250	FULL DETENT / FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.
1107-2121-6250	LIMITED DETENT / LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.
1109-2121-6250	SMOOTH BORE / SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.
1100-2121-6251	FULL DETENT / LIMITED DETENT	STAINLESS STEEL	DC - 40.0 GHz.
1107-2121-6251	LIMITED DETENT / SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.
1109-2121-6251	FULL DETENT / SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.

female, jack to male, plug, straight

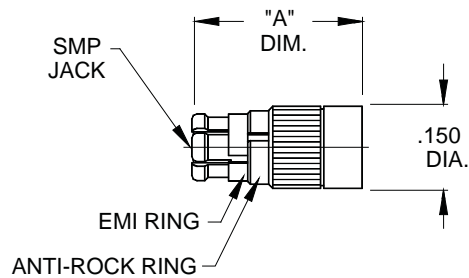


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
1100-2021-5400	FULL DETENT	BERYLLIUM COPPER	DC - 40.0 GHz.
1107-2021-5400	LIMITED DETENT	BERYLLIUM COPPER	DC - 40.0 GHz.
1109-2021-5400	SMOOTH BORE	BERYLLIUM COPPER	DC - 40.0 GHz.

Specifications are subject to change without notice

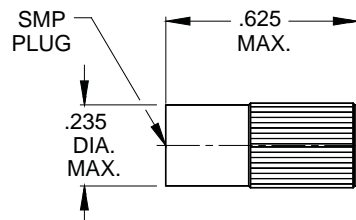
# smp • termination

smp, female, jack, termination



PART NUMBER	"A" DIM.	POWER	MATERIAL TYPE	FREQUENCY RANGE / VSWR MAX.
5400-2005-5400	.57 MAX.	0.5 W	BERYLLIUM COPPER	DC - 18.0 GHz. / 1.20 : 1
5400-2005-5401	.57 MAX.	0.5 W	BERYLLIUM COPPER	DC - 26.5 GHz. / 1.30 : 1

smp, male, plug, termination



PART NUMBER	ENGAGEMENT	POWER	MATERIAL TYPE	FREQ. RANGE / VSWR MAX.
5400-2105-6250	FULL DETENT	0.5 W	STAINLESS STEEL	DC - 18.0 GHz. / 1.20 : 1
5400-2107-6250	LIMITED DETENT	0.5 W	STAINLESS STEEL	DC - 18.0 GHz. / 1.20 : 1

Specifications are subject to change without notice