



smpm

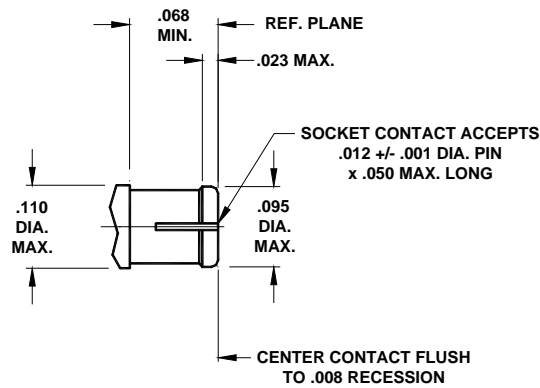


www.dynawave.com

dynawave
INCORPORATED

smpm interfaces

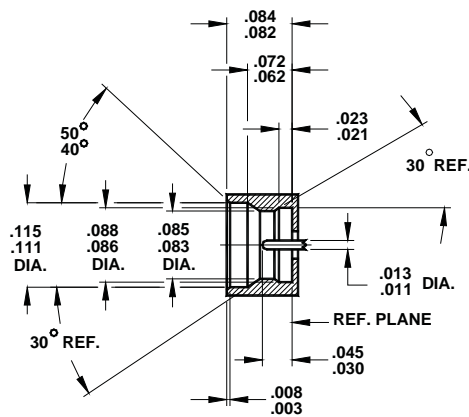
socket (adapter)



FEMALE, JACK

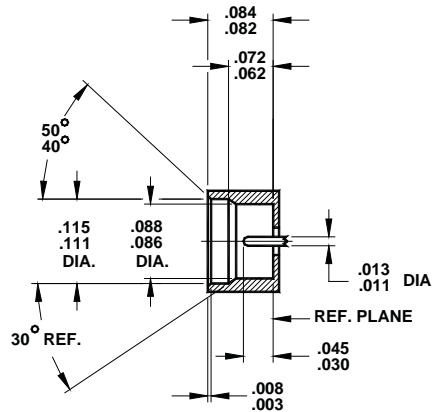
Mil-Std-348A
Fig. 328.1

pin (shroud)



MALE, PLUG, FULL DETENT

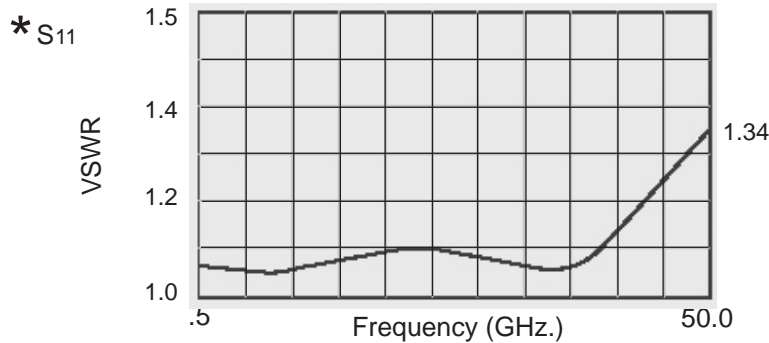
Mil-Std-348A
Fig. 328.2



MALE, PLUG, SMOOTH BORE

Mil-Std-348A
Fig. 328.3

smpm specifications



The Dynawave SMPM socket adapter, P/N 1100-3030-5450 has a Maximum VSWR of 1.35 : 1 through 50.0 Ghz.

* ELECTRICAL :

Frequency Range	DC TO 50.0 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 FGHz.
Nominal Impedance (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.
Temperature 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 1100-3030-5450 DSCC P/N 10019-A

MECHANICAL :

CAPTIVATION-CENTER CONTACT

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

MATING FORCES

Engagement (Max. Lbs.)	Full Detent 6.5, Smooth Bore 1.5
Disengagement (Min. Lbs.)	Full Detent 5.0, Smooth Bore 0.05
Durability (Max. Matings)	Full Detent (100), Smooth Bore (500)
Axial Displacement (Inches)	.000/.010
Total Radial Misalignment (Inches)	.010

ENVIRONMENTAL :

Temperature Cycling	MIL-STD-202, Method 102, Cond. C (-65 °c TO + 165 °c)
Shock	MIL-STD-202, Method 213, Cond. 1 (100 G's)
Vibration	MIL-STD-202, Method 204, Cond. D (20 G's)
Barometric Pressure (Altitude)	MIL-STD-202, Method 105, Cond. C (70,000 FT.)(125 VRMS)
Thermal Shock	MIL-STD-202, METHOD 107, COND. B (HIGH TEMP. 165 °c)
Temperature Rating	-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)

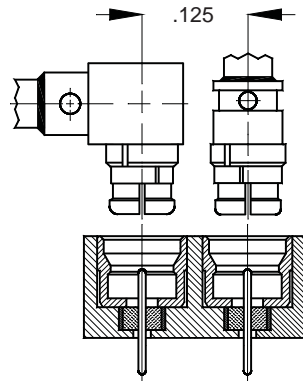
Beryllium Copper per ASTM B196/B, 196M-03, Copper Alloy #UNS C17300, Temper TD04.
Gold per ATSM B 488, Type 1, Grade C, Class 1.25 Over Nickel per SAE-AMS-QQ-N-290, Class 1.

INSULATOR

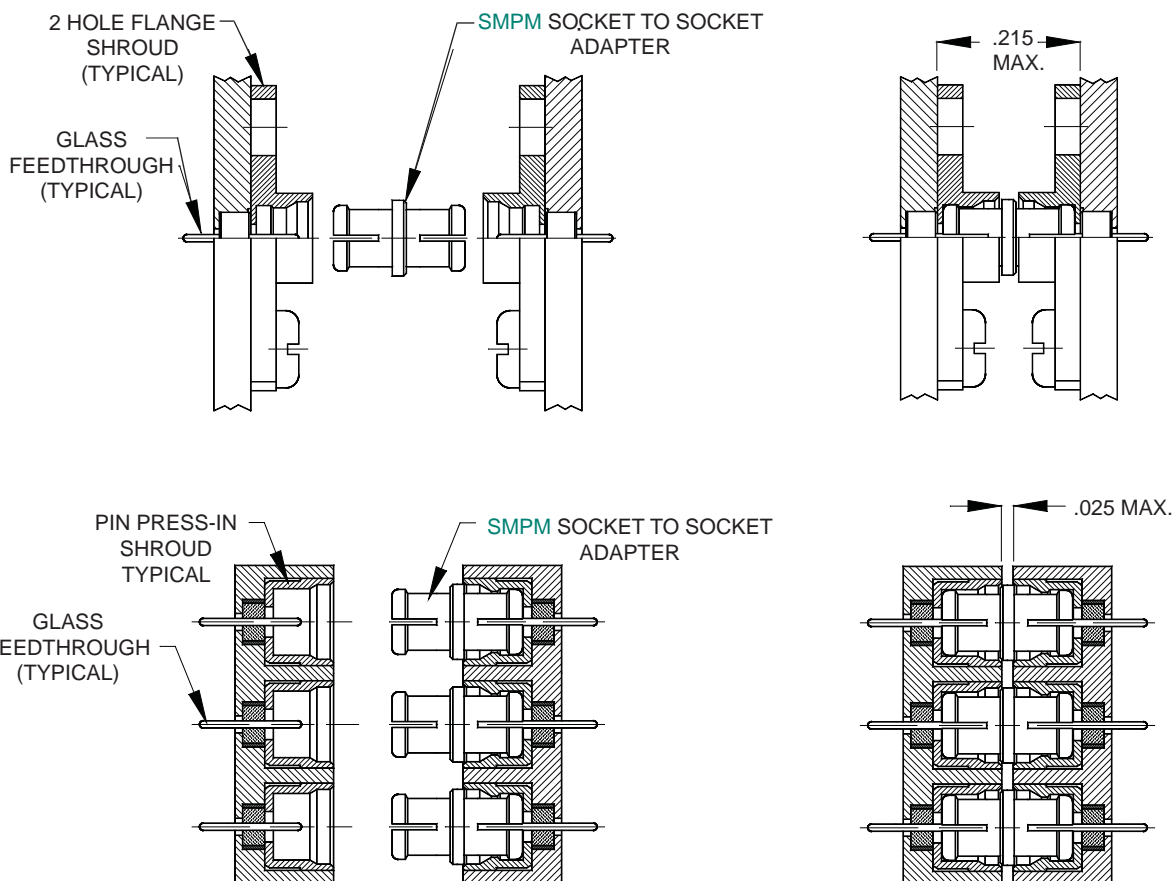
TEFLON PER ASTM D1710, Type 1, Class 1, Grade B.

Specifications are subject to change without notice

smpm application notes



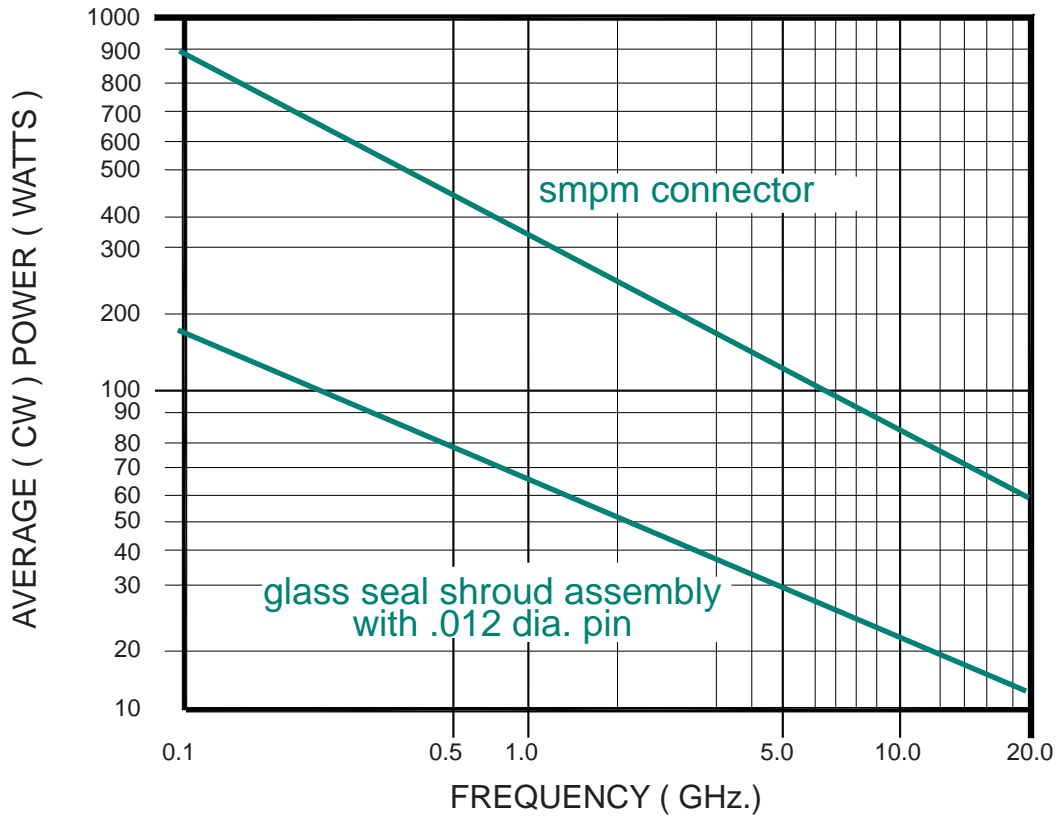
The Dynawave **SMPM** series of connectors are designed to minimize MIC package size and reduce valuable mounting space. The low profile design will allow module to module mounting with a center to center dimension of .125 inches. The **SMPM** cable connectors straight and right angle as shown are designed for .047 and .085 semi-rigid cables.



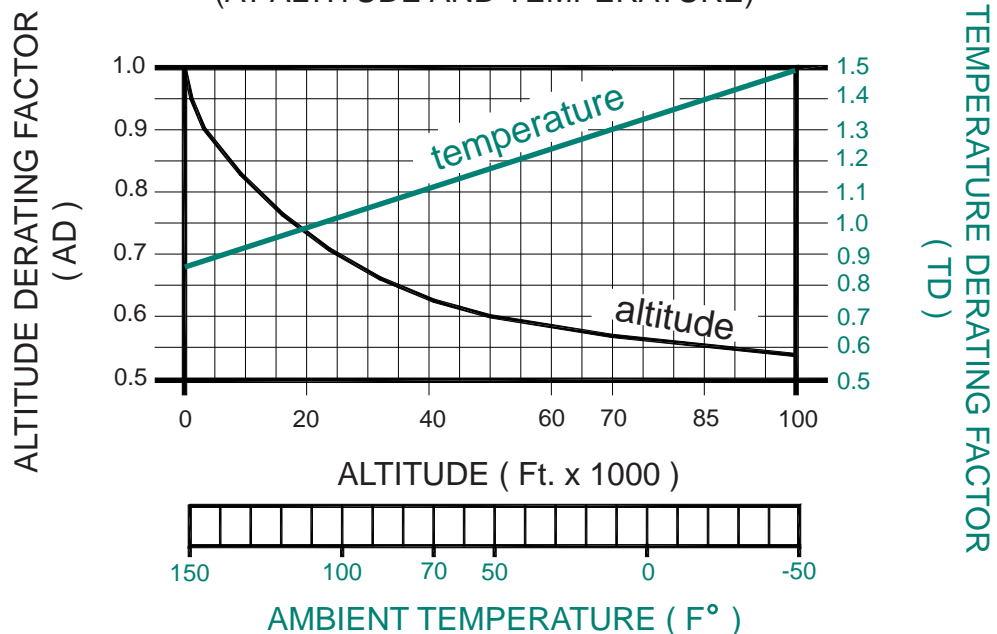
The Dynawave **SMPM** 2 hole flange mount connectors or press-in shrouds are designed to reduce valuable mounting space thus allowing modules to be significantly reduced in size to maintain a low profile. The shrouds are used with a glass bead assembly to complete the coaxial interface. Hermetic Shroud 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.

smpm power ratings

AVERAGE (CW) POWER RATING
(AT SEA LEVEL & +70 °F TEMPERATURE)



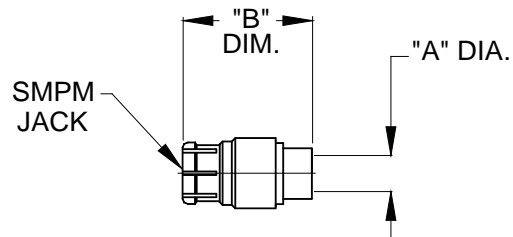
AVERAGE (CW) POWER DERATING FACTOR
(AT ALTITUDE AND TEMPERATURE)



MAXIMUM OPERATING POWER = POWER RATING x AD x TD

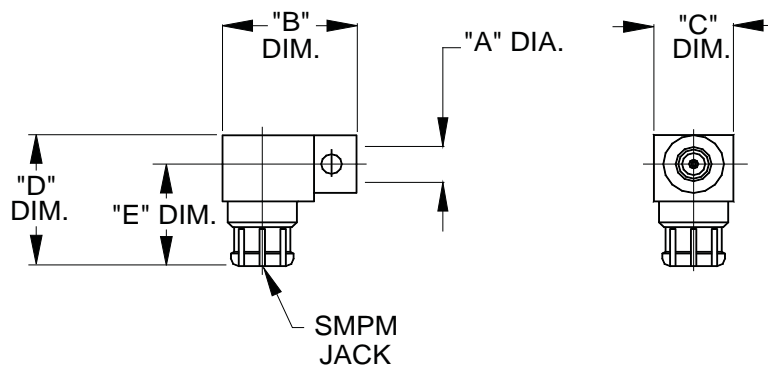
smpm • semi rigid cable connectors

female, jack, straight



PART NUMBER	"A" DIA.	"B" DIM.	CABLE TYP.	DSCC NUMBER	FREQ. RANGE
3000-3420-5425	.036 MIN.	.260	.034 S.R.	-----	DC - 50.0 GHz.
3000-4720-5425	.049 MIN.	.260	.047 S.R.	-----	DC - 50.0 GHz.
3000-8520-5425	.089 MIN.	.285	RG405/U (.085)	-----	DC - 50.0 GHz.

female, jack, right angle

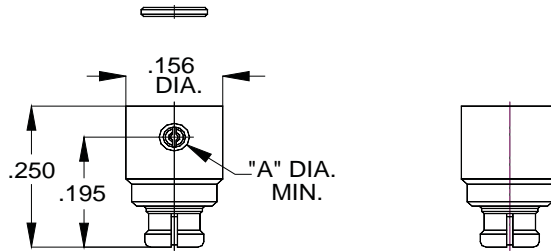


PART NUMBER	"A" DIA.	"B" DIM.	"C" DIM.	"D" DIM.	"E" DIM.	CABLE TYPE	FREQ. RANGE
3001-3420-5444	.036 MIN.	.147	.109	.200	.161	.034 S.R.	DC - 18.0 GHz.
3001-4720-5444	.049 MIN.	.147	.109	.200	.161	.047 S.R.	DC - 18.0 GHz.
3001-8520-5444	.089 MIN.	.220	.125	.230	.170	RG405/U (.085)	DC - 18.0 GHz.

Specifications are subject to change without notice

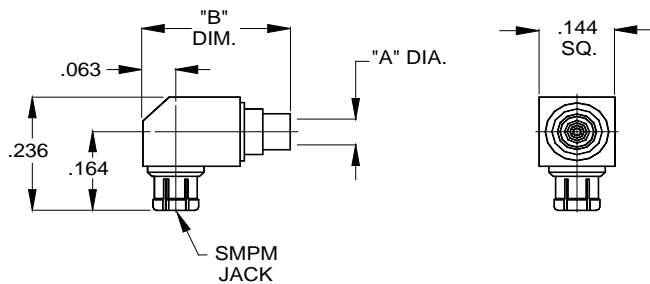
smpm • semi rigid cable connectors

female, jack, right angle



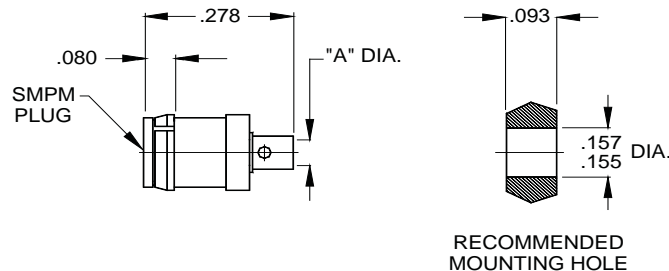
PART NUMBER	"A" DIA.	CABLE TYPE	DSCC NUMBER	FREQUENCY RANGE
3001-3420-5425	.036 MIN.	.034 S.R.	-----	DC - 18.0 GHz.
3001-4720-5425	.049 MIN.	.047 S.R.	-----	DC - 18.0 GHz.
3001-8520-5425	.089 MIN.	RG405/U (.085)	-----	DC - 18.0 GHz.

female, jack, right angle



PART NUMBER	"A" DIA.	"B" DIM.	CABLE TYPE	DSCC NUMBER	FREQ. RANGE
3001-3420-5429	.036 MIN.	.280	.034 S.R.	-----	DC - 40.0 GHz.
3001-4720-5429	.049 MIN.	.280	.047 S.R.	-----	DC - 40.0 GHz.
3001-8520-5429	.089 MIN.	.320	RG405/U (.085)	-----	DC - 40.0 GHz.

male, plug, straight, float mount

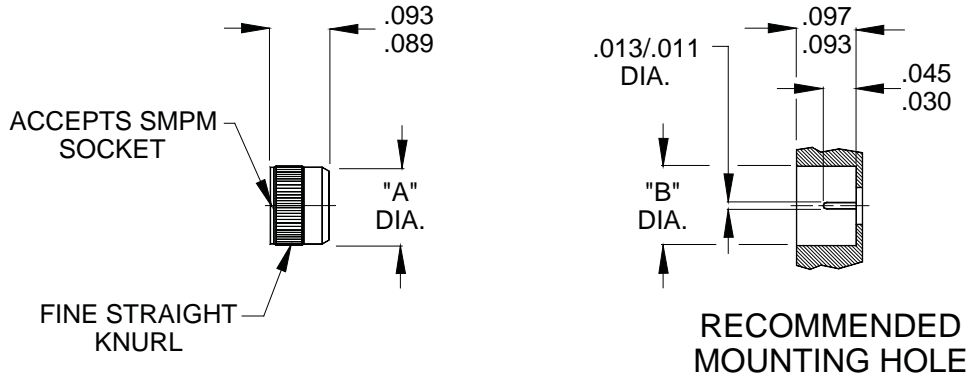


PART NUMBER	"A" DIM.	CABLE TYPE	ENGAGEMENT	MATERIAL TYPE	FREQUENCY RANGE
3160-4720-6201	.049 MIN.	.047 S.R.	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.
3169-4720-6201	.049 MIN.	.047 S.R.	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.
3160-8520-6203	.089 MIN.	RG405/U (.085)	FULL DETENT	STAINLESS STEEL	DC - 40.0 GHz.
3169-8520-6203	.089 MIN.	RG405/U (.085)	SMOOTH BORE	STAINLESS STEEL	DC - 40.0 GHz.

Specifications are subject to change without notice

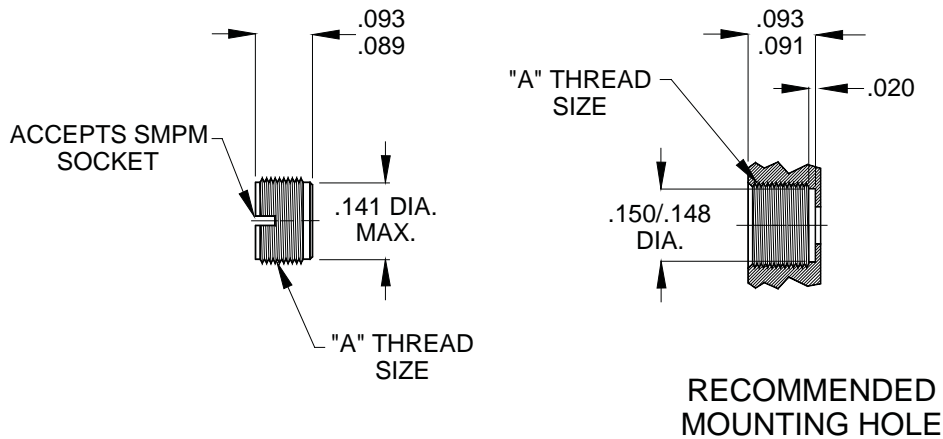
smpm • shrouds and bushings

press-in shroud



PART NUMBER	"A" DIA.	"B" DIA.	MATERIAL TYPE	ENGAGEMENT TYPE	PRESS TOOL
9-31011	.117/.115	.113/.112	STAINLESS STEEL	FULL DETENT	9-30142-00
9-31000	.137/.135	.133/.132	STAINLESS STEEL	SMOOTH BORE	9-30142-00
9-31911	.117/.115	.113/.112	STAINLESS STEEL	FULL DETENT	9-30142-09
9-31918	.137/.135	.133/.132	STAINLESS STEEL	SMOOTH BORE	9-30142-09

thread-in shroud

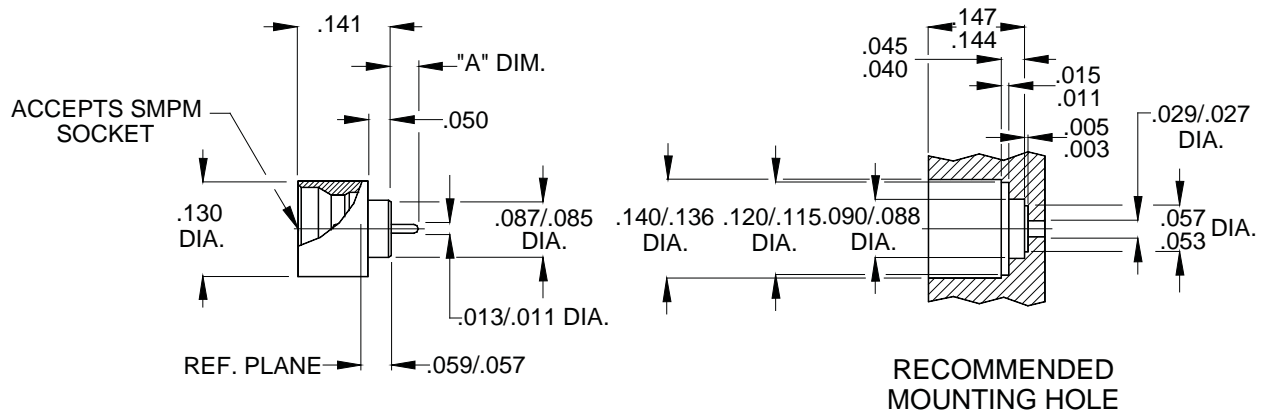


PART NUMBER	"A" THREAD SIZE	MATERIAL TYPE	ENGAGEMENT TYPE	TORQUE TOOL
9-31015	.164-36UNS-2A	STAINLESS STEEL	FULL DETENT	9-30164-00
9-31016	.164-64UNS-2A	STAINLESS STEEL	FULL DETENT	9-30164-00
9-31917	.164-36UNS-2A	STAINLESS STEEL	SMOOTH BORE	9-30164-09
9-31920	.164-64UNS-2A	STAINLESS STEEL	SMOOTH BORE	9-30164-09

Specifications are subject to change without notice

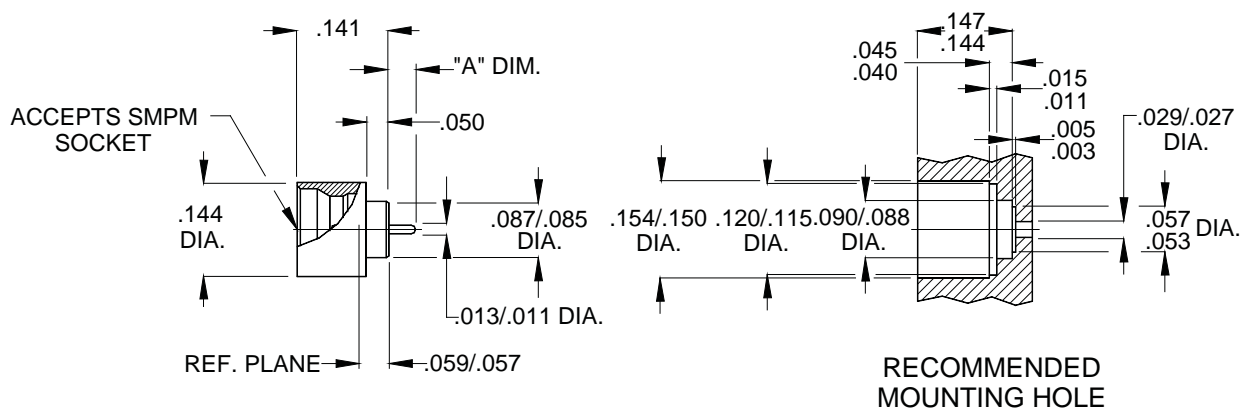
smpm • shrouds and bushings

hermetic solder-in shroud



PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
3140-0434-7404	.130	FULL DETENT	KOVAR	DC-46.0 GHz.
3140-0434-7450	.050	FULL DETENT	KOVAR	DC-46.0 GHz.
3140-0434-7470	.070	FULL DETENT	KOVAR	DC-46.0 GHz.
3149-0434-7404	.130	SMOOTH BORE	KOVAR	DC-46.0 GHz.
3149-0434-7450	.050	SMOOTH BORE	KOVAR	DC-46.0 GHz.
3149-0434-7470	.070	SMOOTH BORE	KOVAR	DC-46.0 GHz.

hermetic solder-in shroud

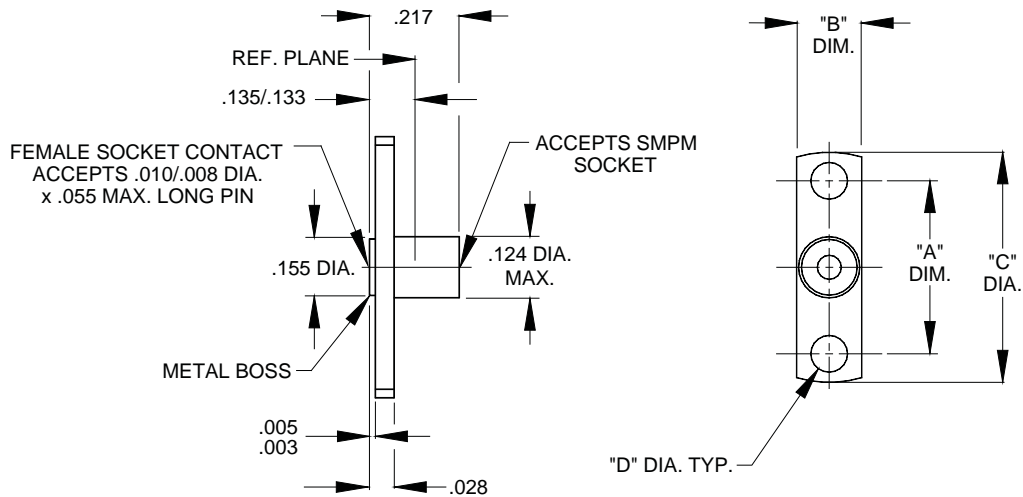


PART NUMBER	"A" DIM.	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
3140-0434-7405	.130	FULL DETENT	KOVAR	DC-46.0 GHz.
3140-0434-7451	.050	FULL DETENT	KOVAR	DC-46.0 GHz.
3140-0434-7471	.070	FULL DETENT	KOVAR	DC-46.0 GHz.
3149-0434-7405	.130	SMOOTH BORE	KOVAR	DC-46.0 GHz.
3149-0434-7451	.050	SMOOTH BORE	KOVAR	DC-46.0 GHz.
3149-0434-7471	.070	SMOOTH BORE	KOVAR	DC-46.0 GHz.

Specifications are subject to change without notice

smpm • shrouds and bushings

male, plug, flange mount, field replacable

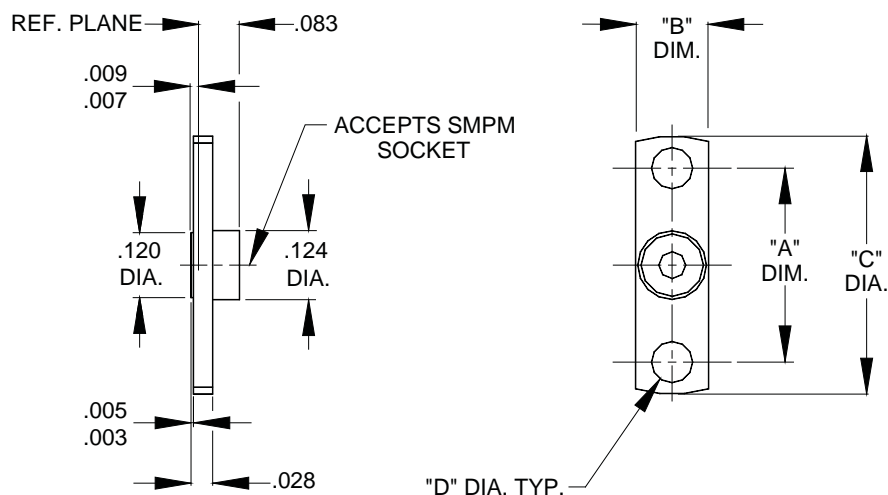


PART NUMBER	"A" DIM.	"B" DIM.	"C" DIA.	"D" DIA.	ENGAGEMENT TYPE	FREQUENCY RANGE
3152-0881-6228	.282	.165	.400	.073	FULL DETENT	DC-40.0 GHz.
3152-0881-6232	.328	.187	.480	.098	FULL DETENT	DC-40.0 GHz.
3152-0881-6240	.400	.187	.550	.102	FULL DETENT	DC-40.0 GHz.
3152-0881-6248	.481	.222	.625	.102	FULL DETENT	DC-40.0 GHz.
3192-0881-6228	.282	.165	.400	.073	SMOOTH BORE	DC-40.0 GHz.
3192-0881-6232	.328	.187	.480	.098	SMOOTH BORE	DC-40.0 GHz.
3192-0881-6240	.400	.187	.550	.102	SMOOTH BORE	DC-40.0 GHz.
3192-0881-6248	.481	.222	.625	.102	SMOOTH BORE	DC-40.0 GHz.

Specifications are subject to change without notice

smpm • shrouds and bushings

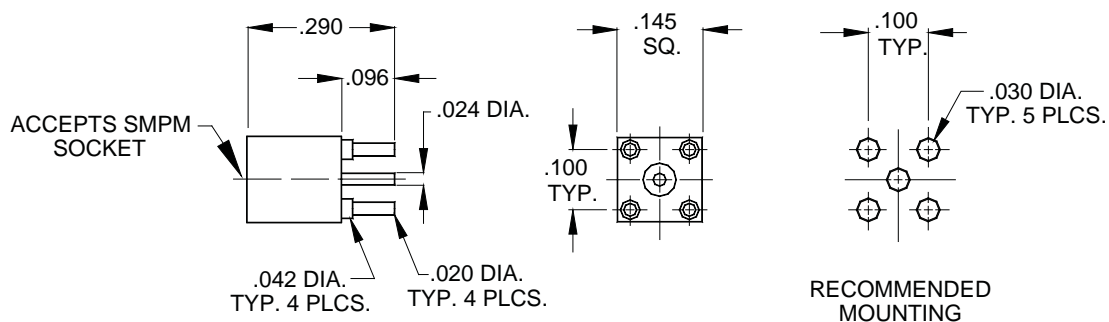
flange mount shroud with metal boss



CENTERING TOOL FOR ALL DETENTS : 9-31040

PART NUMBER	"A" DIM.	"B" DIM.	"C" DIA.	"D" DIA.	ENGAGEMENT TYPE	DSCC PART NUMBER
9-31801	.282	.165	.400	.073	FULL DETENT	-----
9-31802	.328	.187	.480	.098	FULL DETENT	-----
9-31803	.400	.187	.550	.102	FULL DETENT	-----
9-31804	.481	.222	.625	.102	FULL DETENT	-----
9-31901	.282	.165	.400	.073	SMOOTH BORE	-----
9-31902	.328	.187	.480	.098	SMOOTH BORE	-----
9-31903	.400	.187	.550	.102	SMOOTH BORE	-----
9-31904	.481	.222	.625	.102	SMOOTH BORE	-----

printed circuit board thru hole mount

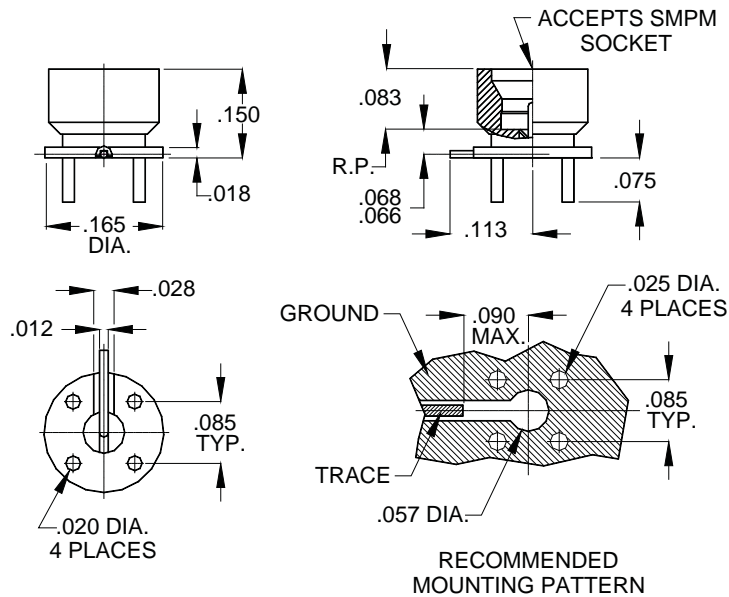


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
3120-0031-6400	FULL DETENT	STAINLESS STEEL	DC-12.5 GHz.
3129-0031-6400	SMOOTH BORE	STAINLESS STEEL	DC-12.5 GHz.

Specifications are subject to change without notice

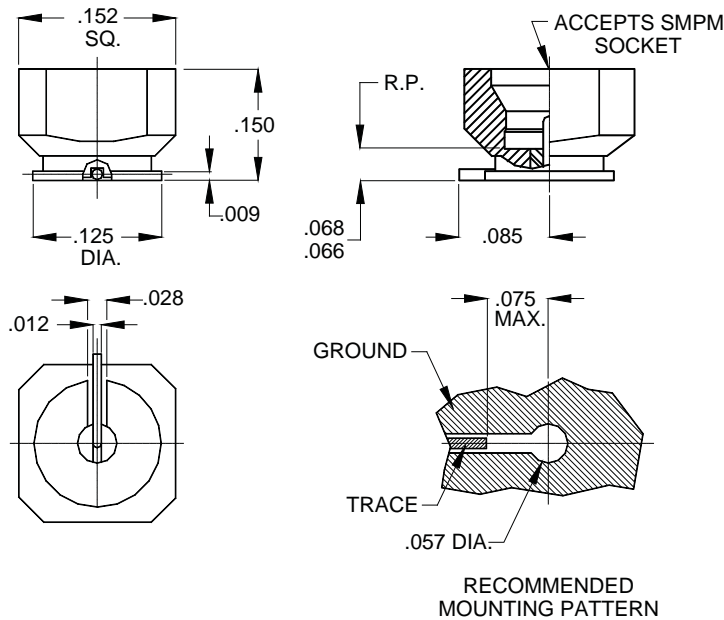
smpm • shrouds and bushings

printed circuit board thru hole, surface mount



PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
3120-0531-6401	FULL DETENT	STAINLESS STEEL	DC-18.0 GHz.
3129-0531-6401	SMOOTH BORE	STAINLESS STEEL	DC-18.0 GHz.

printed circuit board, surface mount

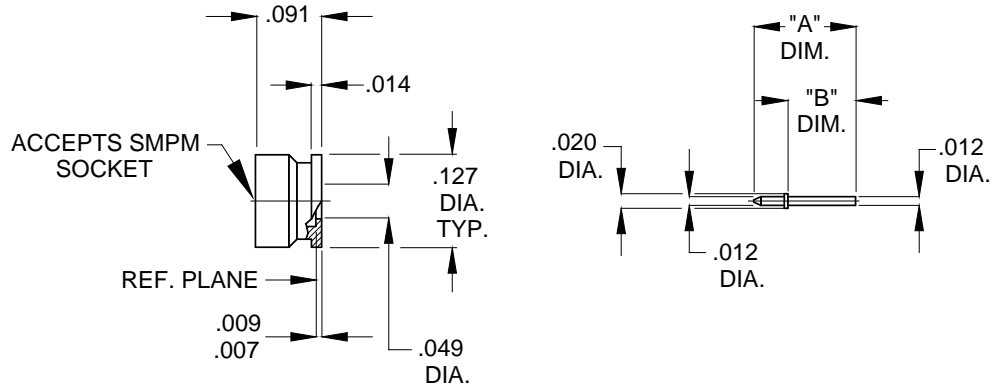


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
3120-0531-6400	FULL DETENT	STAINLESS STEEL	DC-18.0 GHz.
3129-0531-6400	SMOOTH BORE	STAINLESS STEEL	DC-18.0 GHz.

Specifications are subject to change without notice

smpm • shrouds and bushings

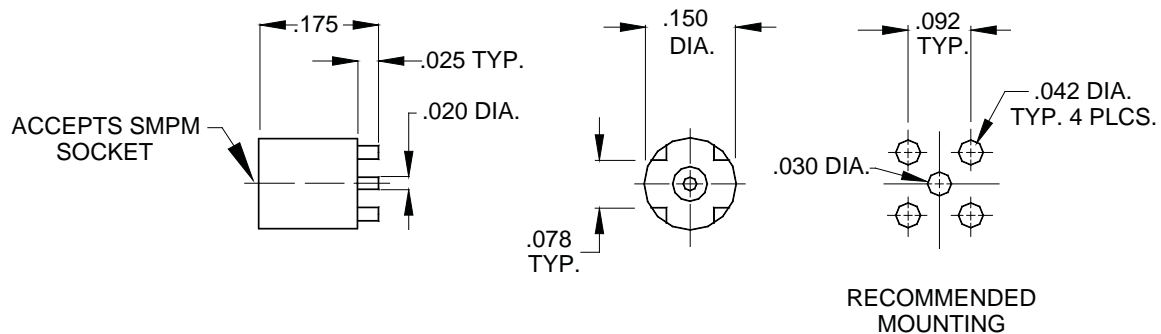
printed circuit board, surface mount



CENTERING TOOL : 9-31040

PART NUMBER	"A" DIA.	"B" DIA.	MATERIAL TYPE	ENGAGEMENT	FREQUENCY RANGE
3120-0390-6400	.140	.093	STAINLESS STEEL	FULL DETENT	DC-12.5 GHz.
3120-0390-6401	.052	.005	STAINLESS STEEL	FULL DETENT	DC-12.5 GHz.
3120-0390-6402	.047	.000	STAINLESS STEEL	FULL DETENT	DC-12.5 GHz.
3120-0390-6403	.084	.005	STAINLESS STEEL	FULL DETENT	DC-12.5 GHz.
3129-0390-6400	.140	.093	STAINLESS STEEL	SMOOTH BORE	DC-12.5 GHz.
3129-0390-6401	.052	.005	STAINLESS STEEL	SMOOTH BORE	DC-12.5 GHz.
3129-0390-6402	.047	.000	STAINLESS STEEL	SMOOTH BORE	DC-12.5 GHz.
3129-0390-6403	.084	.005	STAINLESS STEEL	SMOOTH BORE	DC-12.5 GHz.

printed circuit board, thru hole surface mount

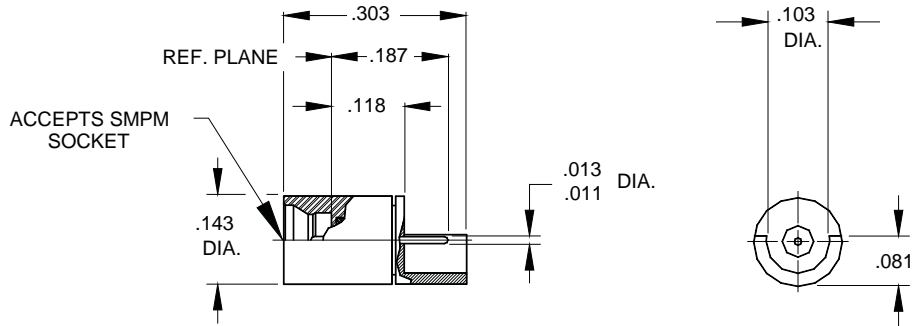


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
3120-0031-2300	FULL DETENT	BRASS	DC-40.0 GHz.
3129-0031-2300	SMOOTH BORE	BRASS	DC-40.0 GHz.

Specifications are subject to change without notice

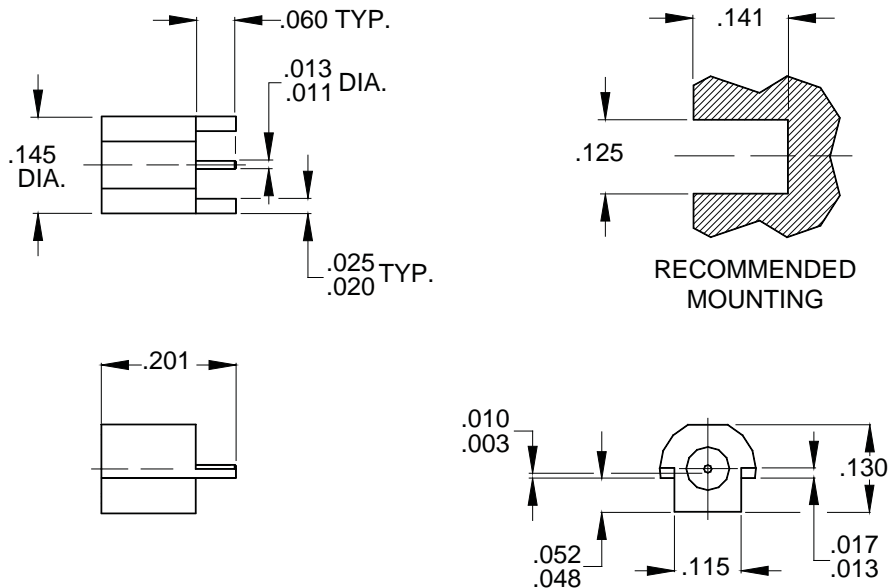
smpm • shrouds and bushings

printed circuit board, edge mount



PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
3120-0535-6400	FULL DETENT	STAINLESS STEEL	DC-40.0 GHz.
3129-0535-6400	SMOOTH BORE	STAINLESS STEEL	DC-40.0 GHz.

printed circuit board, hermetically sealed, edge mount

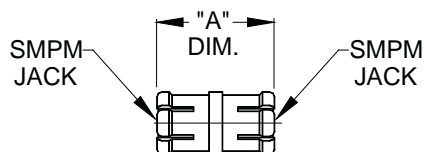


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
3120-0431-6418	FULL DETENT	STAINLESS STEEL	DC-40.0 GHz.
3129-0431-6418	SMOOTH BORE	STAINLESS STEEL	DC-40.0 GHz.

Specifications are subject to change without notice

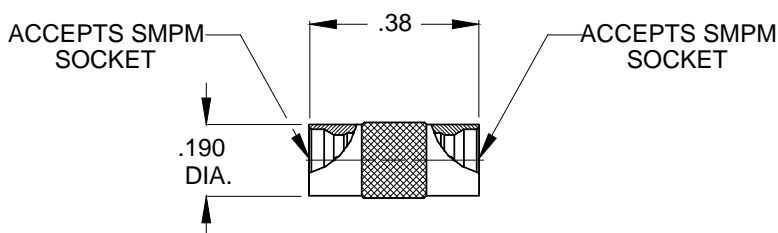
smpm • in-series adapters

female, jack to female, jack, straight



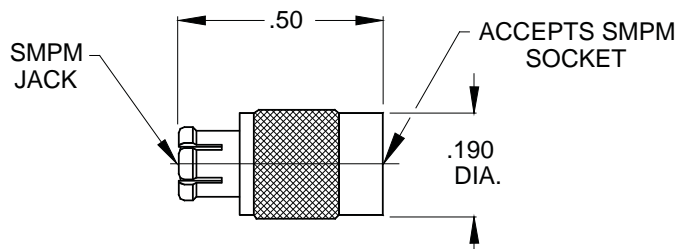
PART NUMBER	"A" DIM.	DSCC PART NUMBER	MATERIAL TYPE	FREQUENCY RANGE
1100-3030-5450	.190/.189	-----	BERYLLIUM	DC-50.0 GHz.
1100-3030-5451	.505/.495	-----	BERYLLIUM	DC-50.0 GHz.
1100-3030-5455	.2555/.2535	-----	BERYLLIUM	DC-50.0 GHz.
1100-3030-5452	.210	-----	BERYLLIUM	DC-50.0 GHz.

male, plug to male, plug, straight



PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
1100-3131-6250	FULL DETENT / FULL DETENT	STAINLESS STEEL	DC-50.0 GHz.
1100-3131-6251	FULL DETENT / SMOOTH BORE	STAINLESS STEEL	DC-50.0 GHz.
1100-3131-6252	SMOOTH BORE / SMOOTH BORE	STAINLESS STEEL	DC-50.0 GHz.

female, jack to male, plug, straight

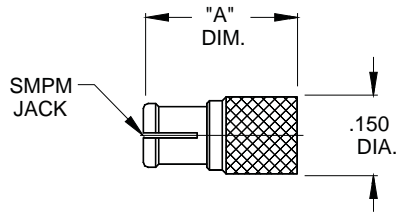


PART NUMBER	ENGAGEMENT TYPE	MATERIAL TYPE	FREQUENCY RANGE
1100-3031-6250	FULL DETENT	STAINLESS STEEL	DC-50.0 GHz.
1100-3031-6251	SMOOTH BORE	STAINLESS STEEL	DC-50.0 GHz.

Specifications are subject to change without notice

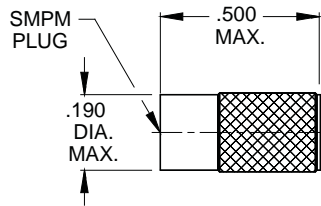
smpm • termination

smpm, female, jack, termination



PART NUMBER	"A" DIM.	POWER	MATERIAL TYPE	FREQUENCY RANGE/VSWR MAX.
5400-3005-5400	.40 MAX.	0.5 W	BERYLLIUM COPPER	DC-30.0 GHz. / 1.20 : 1
5400-3005-5401	.40 MAX.	0.5 W	BERYLLIUM COPPER	DC-50.0 GHz. / 1.30 : 1

smpm, male, plug, termination



PART NUMBER	ENGAGEMENT	POWER	MATERIAL TYPE	FREQ. RANGE/VSWR MAX.
5400-3105-6200	FULL DETENT	0.5 W	STAINLESS STEEL	DC-30.0 GHz. / 1.20 : 1
5400-3109-6200	SMOOTH BORE	0.5 W	STAINLESS STEEL	DC-50.0 GHz. / 1.30 : 1

Specifications are subject to change without notice