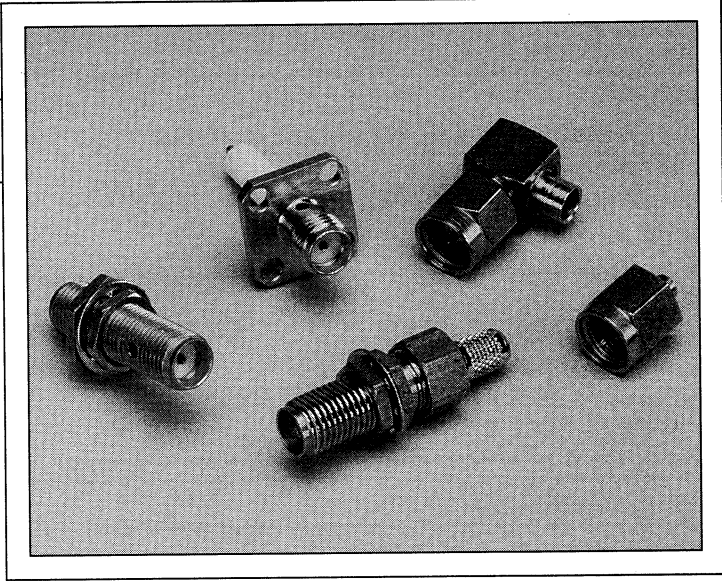


Subminiature Connectors



SMA connectors offer rugged mechanical performance, a stainless steel construction, positive engagement and threaded coupling for vibration proof applications. Featuring a broad frequency range, SMA connectors are available from DC to 18 GHz for semi-rigid cable assemblies or DC to 12.4 GHz for flexible cable applications. Available in straight and right angle configurations for popular cable groups, as well as printed circuit board mount designs.

SMA Subminiature Connectors

SMA 20 Series149
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SMA 20 SERIES

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MECHANICAL

MATERIALS

Bodies, Nuts: Corrosion Resistant Steel per ASTM A 582 & ASTM A 484.
 Insulation: Teflon (PTFE) per ASTM D 1457.
 Contacts, Male And Female: Beryllium Copper per ASTM B 196.
 Gaskets: Silicone Rubber per ZZ-R-765.

PLATING

Gold per MIL-C-45204.
 Nickel per MIL-C-14550.
 Passivated per ASTM-A380.

FINISHES (Add letter to end of part number.)

"G": Body - .000020 Gold.
 Contact - .000050 Gold over .000050 Nickel.
 "P": Body - Passivated.
 Contact - .000050 Gold over .000050 Nickel.
 All other parts: Gold Plated or Passivated to meet the Environmental Requirements of MIL-C-39012.

MATING CHARACTERISTICS

Center Contact Pin and Socket: per MIL-C-39012 (1 oz. Min.) (3 lbs. Max.).
 Force to Engage/Disengage: 2 In.-lbs., Max. Torque.
 Coupling Nut Retention: 60 lbs. Min.
 Coupling Proof Torque: 15 In.-lbs., Min.
 Connector Durability: 500 Cycles per MIL-C-39012.

ELECTRICAL

Impedance: 50 Ohms.
 Frequency Range: 0-18 GHz. (Cable Dependent).
 Insulation Resistance: 5,000 Megohms.
 Temperature Rating: -85° F to +329° F.
 (-65° C to +165° C)
 Recommended Torque: 7-10 In.-lbs.

CABLE	RG 402-M17/130 (.141 Semi-Rigid)	RG 405-M17/133 (.086 Semi-Rigid)
DWV:	1500 V RMS.	1000 V RMS.
RF High Potential:	1,000 V RMS.	670 V RMS.
Contact Resistance: Center Contact	2.0 Milliohms Max.	2.0 Milliohms Max.
Outer Contact	2.0 Milliohms Max.	2.0 Milliohms Max.
Outer Contact To Cable	0.5 Milliohms Max.	0.5 Milliohms Max.
VSWR: (DC - 18 GHz)	1.05 + .005f (GHz).	1.05 + .005f (GHz).
Corona Level:	375 Volts Min.	335 Volts Min.
RF Leakage:	-90 dB Min.	-90 dB Min.
Insertion Loss:	.03 x \sqrt{f} (GHz).	.03 x \sqrt{f} (GHz).

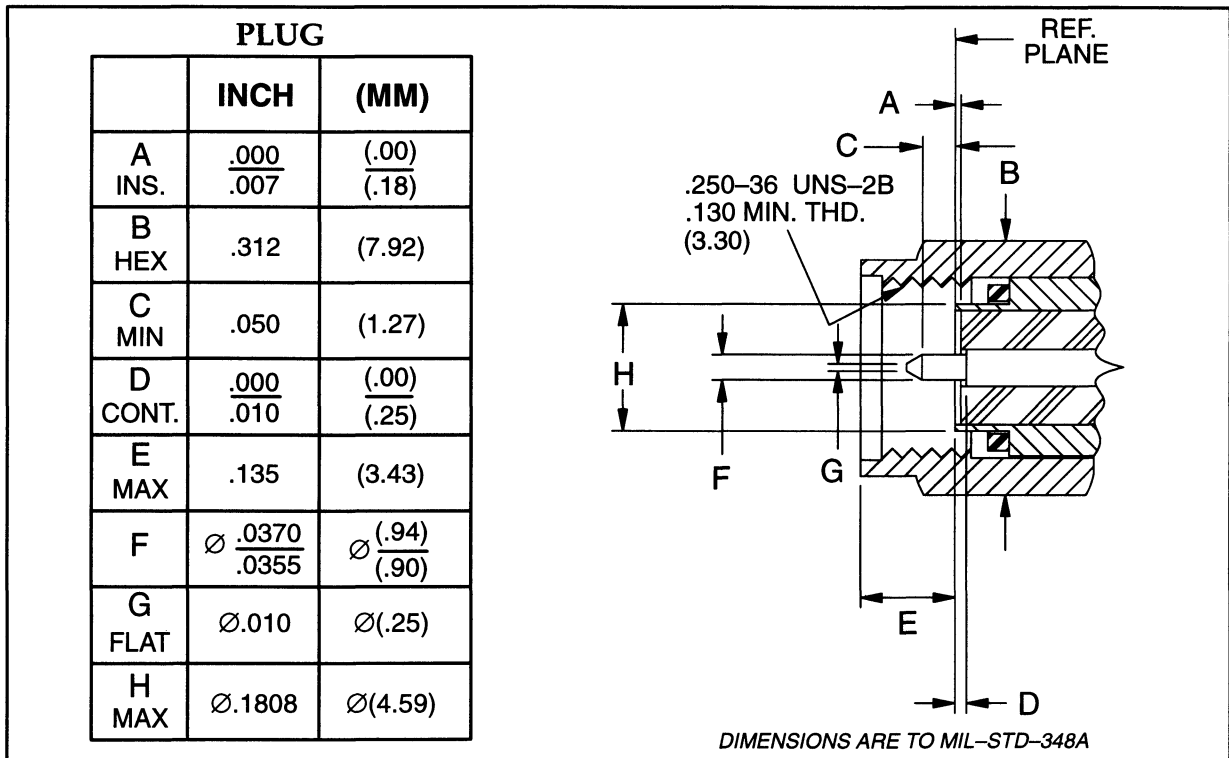
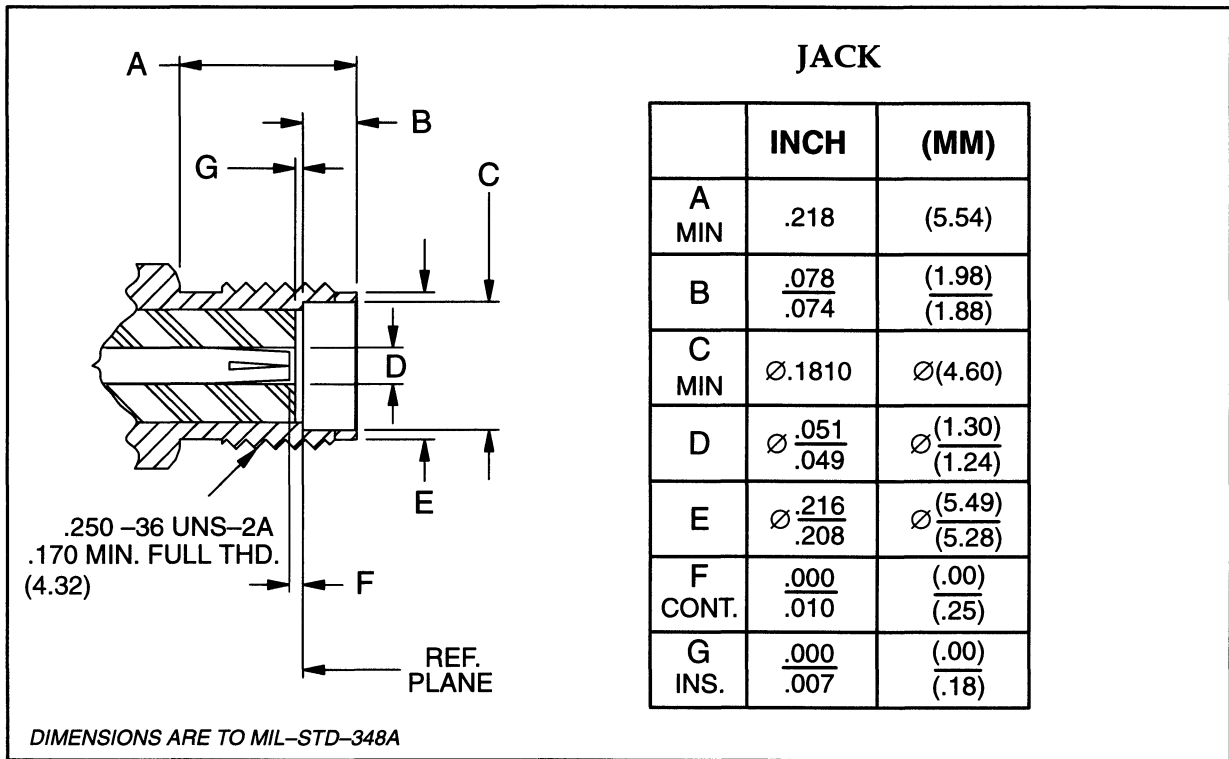
ENVIRONMENTAL

Vibration, High Frequency: MIL-STD-202, Method 204, Test Condition D.
 Shock: MIL-STD-202, Meth. 213, Test Condition I.
 Thermal Shock: MIL-STD-202, Method 107, Test Condition B at +185° F (+85° C).
 Moisture Resistance: MIL-STD-202, Method 106, Omit Step 7B.
 Corrosion: MIL-STD-202, Method 101, Test Condition B, 5% Salt Solution.



SMA 20 SERIES

INTERFACE DRAWINGS



SMA 20 SERIES DIRECT SOLDER

Part Number Gold	Part Number Passivated	Fig.	Cable	Straight Plug
20-0200-1410G	20-0200-1410P	1	RG402-M17/130 (.141 S.R.)	<p style="text-align: center;">FIG. 1 FIG. 2</p>
20-0200-1411G	20-0200-1411P	2	RG402-M17/130 (.141 S.R.)	
				Direct Solder (No Contact)

Part Number Gold	Part Number Passivated	Cable	A	Contact	Straight Plug
20-0200-0863G	20-0200-0863P	RG405-M17/133 (.086 S.R.)	.480 (12.19)	Yes	<p style="text-align: center;">A</p> <p style="text-align: center;">.312 HEX (7.92)</p> <p style="text-align: center;">.330 (8.38)</p>
20-0200-1413G	20-0200-1413P	RG402-M17/130 (.141 S.R.)	.515 (13.08)	No	
					Direct Solder (For Minimum Bends)

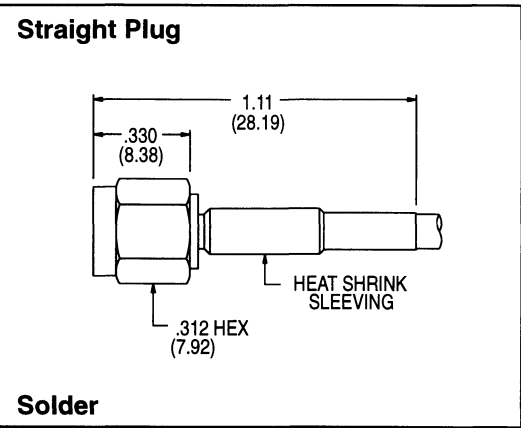
Part Number Gold	Part Number Passivated	A DIA.	B DIA.	Cable	Insulator	Straight Plug
20-0200-0860G	20-0200-0860P	.089 (2.26)	.120 (3.05)	RG405-M17/133 (.086 S.R.)	Unassembled	<p style="text-align: center;">.330 (8.38)</p> <p style="text-align: center;">.312 HEX (7.92)</p> <p style="text-align: center;">.440 (11.18)</p> <p style="text-align: center;">B</p> <p style="text-align: center;">A</p>
20-0200-1412G	20-0200-1412P	.145 (3.68)	.180 (4.57)	RG402-M17/130 (.141 S.R.)	Unassembled	
20-0200-0868G	20-0200-0868P	.089 (2.26)	.120 (3.05)	RG405-M17/133 (.086 S.R.)	Assembled	
20-0200-1418G	20-0200-1418P	.145 (3.68)	.180 (4.57)	RG402-M17/130 (.141 S.R.)	Assembled	
						Direct Solder (With Contact)

Part Number Gold	Part Number Passivated	A DIA.	B DIA.	Cable	Right Angle Plug
20-2200-0860G	20-2200-0860P	.089 (2.26)	.120 (3.05)	RG405-M17/133 (.086 S.R.)	<p style="text-align: center;">675 (17.15)</p> <p style="text-align: center;">535 (13.59)</p> <p style="text-align: center;">.330 (8.38)</p> <p style="text-align: center;">.312 (7.92)</p> <p style="text-align: center;">A</p> <p style="text-align: center;">B</p>
20-2200-1410G	20-2200-1410P	.145 (3.68)	.180 (4.57)	RG402-M17/130 (.141 S.R.)	
20-2200-1411G	20-2200-1411P	.145 (3.68)	.180 (4.57)	RG402-M17/130 (.141 S.R.)	
					Direct Solder

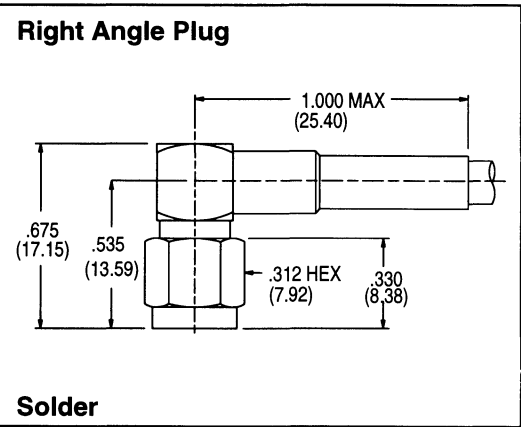


SMA 20 SERIES SOLDER, CRIMP

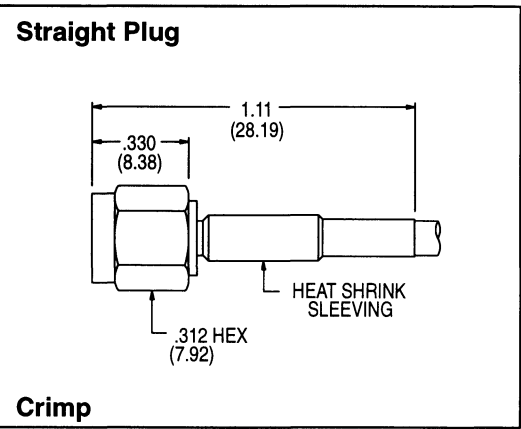
Part Number Gold	Part Number Passivated	Cable
20-0200-0670G	20-0200-0670P	RG188,316,174
20-0200-1201G	20-0200-1201P	RG55,58,141,142,223 RG303,400
20-0200-2670G	20-0200-2670P	RG316 D.S. (M17/152)



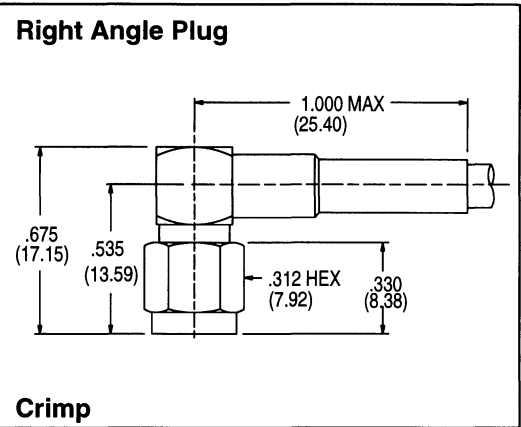
Part Number Gold	Part Number Passivated	Cable
20-2200-0670G	20-2200-0670P	RG188,316,174
20-2200-1201G	20-2200-1201P	RG55,58,141,142,223 RG303,400
20-2200-2670G	20-2200-2670P	RG316 D.S. (M17/152)



Part Number Gold	Part Number Passivated	Cable
20-0800-0670G	20-0800-0670P	RG188,316,174
20-0800-1201G	20-0800-1201P	RG55,142,223,400
20-0800-2670G	20-0800-2670P	RG316 D.S. (M17/152)



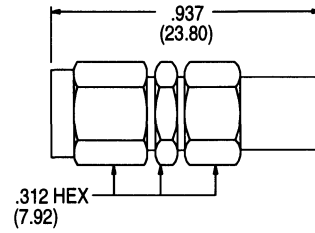
Part Number Gold	Part Number Passivated	Cable
20-2800-0400G	20-2800-0400P	RG178,196
20-2800-0670G	20-2800-0670P	RG188,316,174
20-2800-1080G	20-2800-1080P	RG180,195
20-2800-1200G	20-2800-1200P	RG58,141,303
20-2800-1201G	20-2800-1201P	RG55,142,223,400
20-2800-2670G	20-2800-2670P	RG316 D.S. (M17/152)



SMA 20 SERIES CLAMP, SOLDER/CLAMP

Part Number Gold	Part Number Passivated	Cable
20-0500-0400G	20-0500-0400P	RG178,196
20-0500-0670G	20-0500-0670P	RG188,316,174
20-0500-2670G	20-0500-2670P	RG316 D.S. (M17/152)
20-0500-1080G	20-0500-1080P	RG180,195
20-0500-1200G	20-0500-1200P	RG58,141,303
20-0500-1201G	20-0500-1201P	RG55,142,400

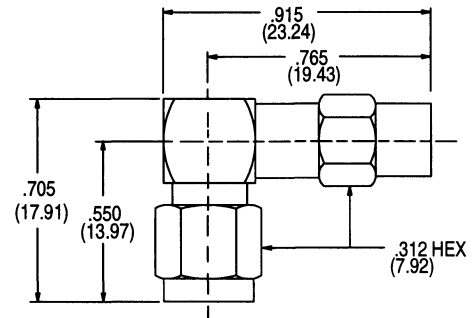
Straight Plug



Clamp

Part Number Gold	Part Number Passivated	Cable
20-2500-0400G	20-2500-0400P	RG178,196
20-2500-0670G	20-2500-0670P	RG188,316,174
20-2500-2670G	20-2500-2670P	RG316 D.S. (M17/152)
20-2500-1080G	20-2500-1080P	RG180,195
20-2500-1200G	20-2500-1200P	RG58,141,303
20-2500-1201G	20-2500-1201P	RG55,142,400

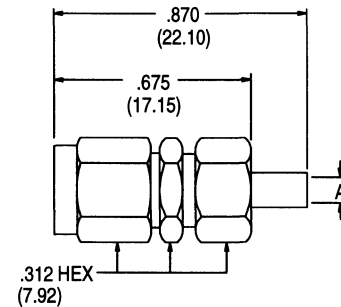
Right Angle Plug



Clamp

Part Number Gold	Part Number Passivated	A DIA.	Cable
20-0300-0860G	20-0300-0860P	.089 (2.26)	RG405-M17/133 (.086 S.R.)
20-0300-1410G	20-0300-1410P	.145 (3.68)	RG402-M17/130 (.141 S.R.)

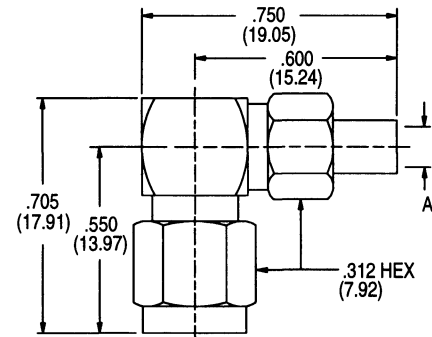
Straight Plug



Solder/Clamp

Part Number Gold	Part Number Passivated	A DIA.	Cable
20-2300-0860G	20-2300-0860P	.089 (2.26)	RG405-M17/133 (.086 S.R.)
20-2300-1410G	20-2300-1410P	.145 (3.68)	RG402-M17/130 (.141 S.R.)

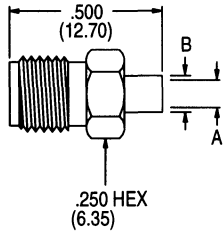
Right Angle Plug



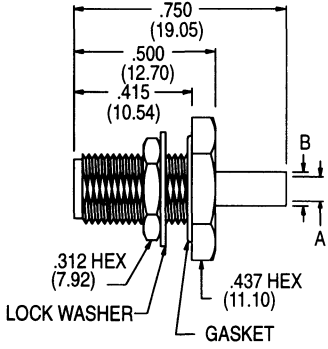
Solder/Clamp



SMA 20 SERIES DIRECT SOLDER, CRIMP/CLAMP

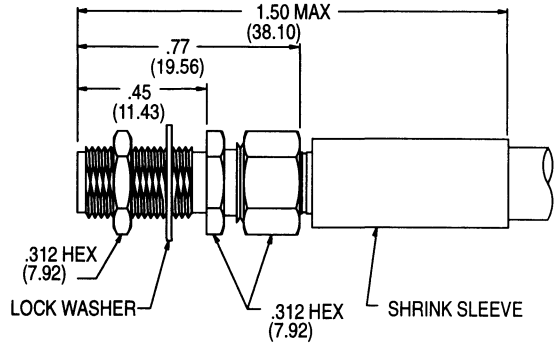
Part Number Gold	A DIA.	B DIA.	Cable	Insulator	Straight Jack 
20-1200-0861G	.089 (2.26)	.120 (3.05)	RG405-M17/133 (.086 S.R.)	Unassembled	
20-1200-1411G	.145 (3.68)	.180 (4.57)	RG402-M17/130 (.141 S.R.)	Unassembled	
20-1200-0868G	.089 (2.26)	.120 (3.05)	RG405-M17/133 (.086 S.R.)	Assembled	
20-1200-1418G	.145 (3.68)	.180 (4.57)	RG402-M17/130 (.141 S.R.)	Assembled	

Direct Solder

Part Number Gold	A DIA.	B DIA.	Cable	Insulator	Straight Jack, Bulkhead 
20-1265-0860G	.089 (2.26)	.120 (3.05)	RG405-M17/133 (.086 S.R.)	Unassembled	
20-1265-1410G	.145 (3.68)	.180 (4.57)	RG402-M17/130 (.141 S.R.)	Unassembled	
20-1265-0868G	.089 (2.26)	.120 (3.05)	RG405-M17/133 (.086 S.R.)	Assembled	
20-1265-1418G	.145 (3.68)	.180 (4.57)	RG402-M17/130 (.141 S.R.)	Assembled	

Direct Solder

See Mounting Data
Page, FIG. 8

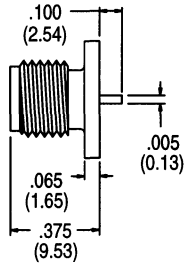
Part Number Gold	Part Number Passivated	Cable	Straight Jack, Bulkhead 
20-1865-0672G	20-1865-0672P	RG187,188,316, 174,179	
20-1865-1082G	20-1865-1082P	RG180,195	
20-1865-1203G	20-1865-1203P	RG58,141,303	
20-1865-1202G	20-1865-1202P	RG142,400	
20-1865-2672G	20-1865-2672P	RG316 D.S. (M17/152)	

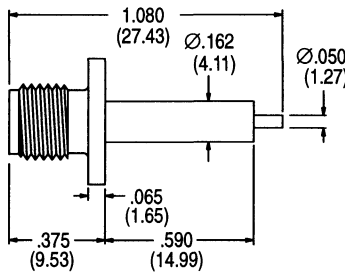
Crimp/Clamp

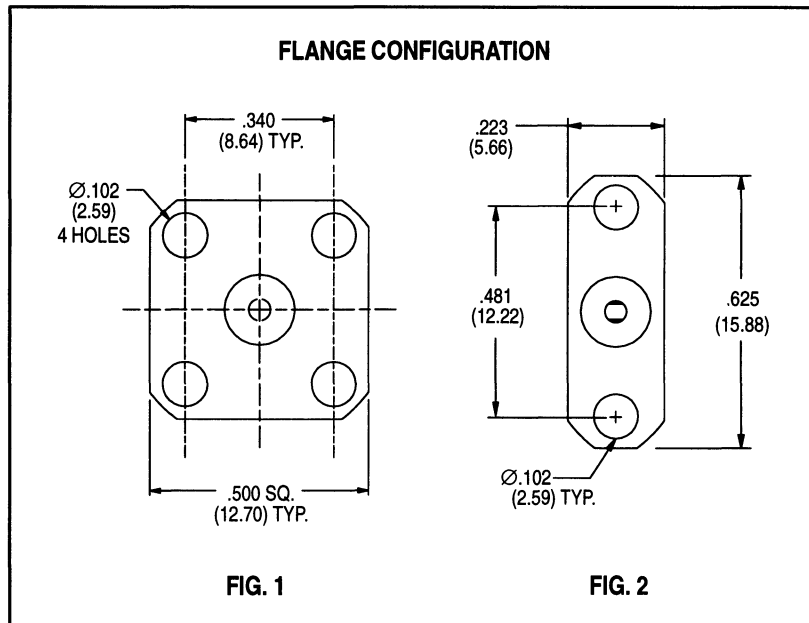
See Mounting Data Page FIG. 8



SMA 20 SERIES MICROSTRIP TERMINATIONS

Part Number Gold	Part Number Passivated	Fig.	Center Contact	Jack, Flange Mount 
20-1355-01G	20-1355-01P	1	Captured	
20-1356-01G	20-1356-01P	2	Captured	

Part Number Gold	Part Number Passivated	Fig.	Center Contact	Jack, Flange Mount 
20-1455-01G	20-1455-01P	1	Captured	
20-1456-01G	20-1456-01P	2	Captured	



MOUNTING HOLE DIMENSIONS

