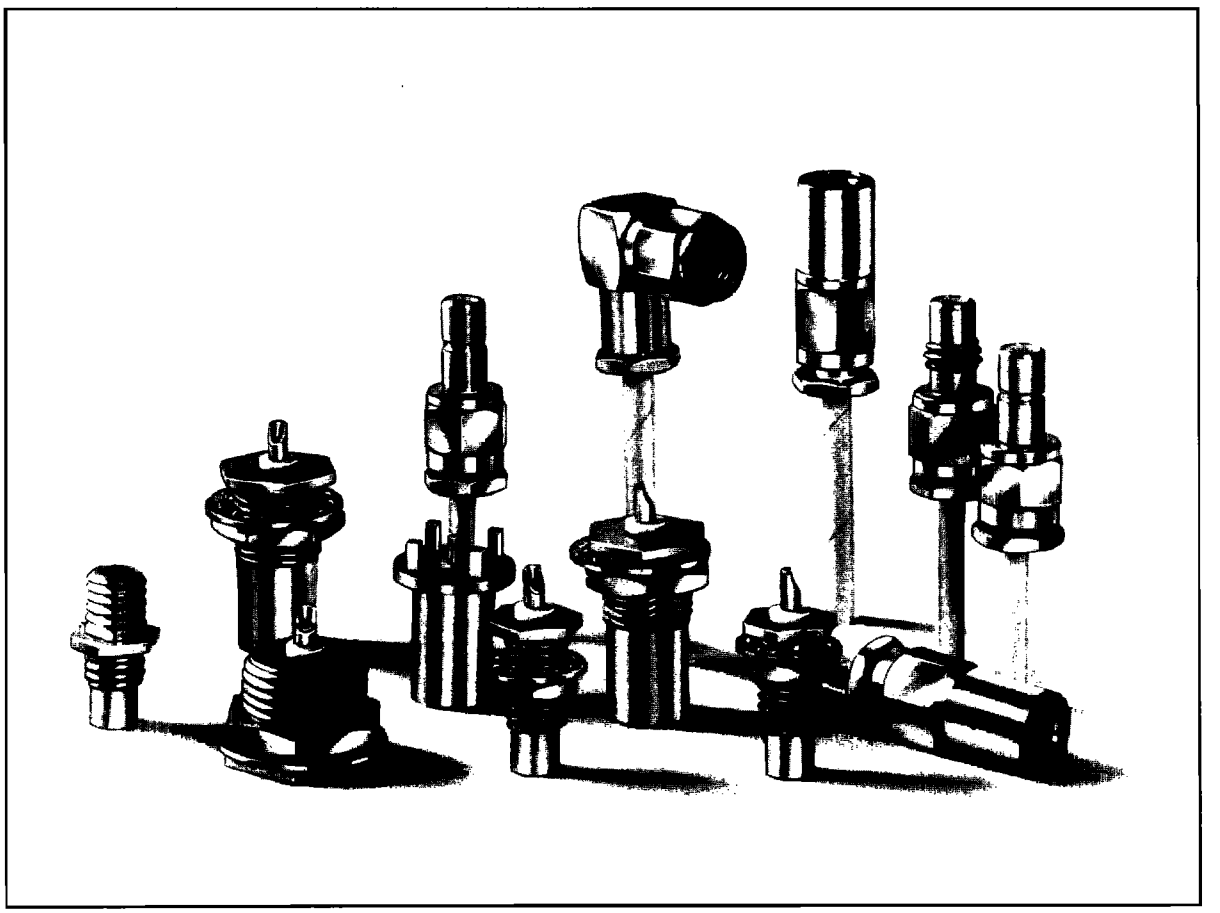
SMC

Screw-On
Subminiature Coaxial Connectors



M/A-COM's line of SMC connectors offers an inexpensive alternative in miniature RF interconnects where packaging density is critical. M/A-COM applies many of the same design standards of their highly reliable OSM (SMA) series to the SMC series. For instance, M/A-COM uses only beryllium copper center contacts for increased durability.

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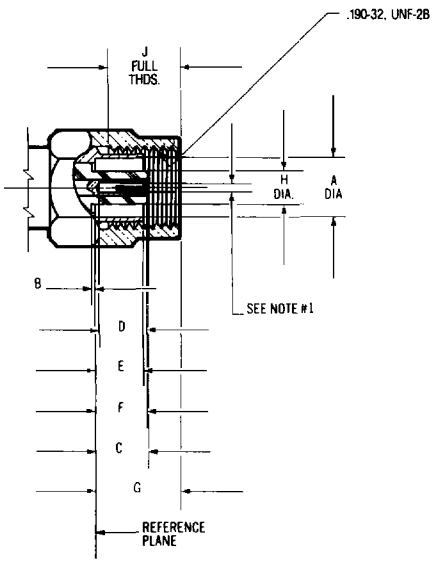
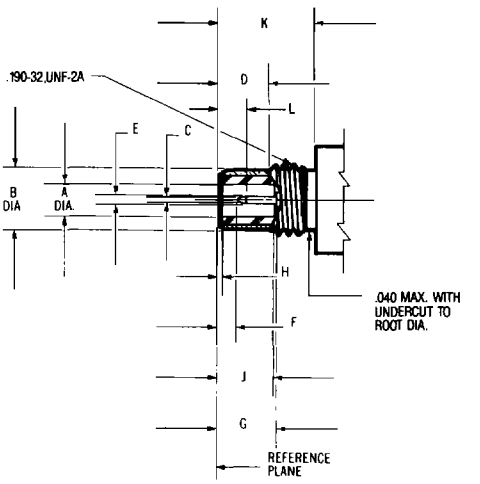
Interface Mating Dimensions





FEMALE

Letter	Inches (Millimeters)[3]	
	Minimum	Maximum
A	.147 (3.73)	-
B	.000 (0.00)	-
C	-	.134 (3.40)
D	.110 (2.79)	-
E	-	.122 (3.10)
F	-	.134 (3.40)
G	-	.233 (5.92)
H	-	.081 (2.06)
J	.110 (2.79)	-

MALE

Letter	Inches (Millimeters)[3]	
	Minimum	Maximum
A	.082 (2.08)	-
B	-	.146 (3.71)
C	-	.010 (0.25)
D	.123 (3.12)	.133 (3.38)
E	.019 (0.48)	.021 (0.53)
F	.024 (0.61)	-
G	.134 (3.40)	-
H	.000 (0.00)	-
J	.134 (3.40)	-
K	.234 (5.94)	-
L	-	.084 (2.13)

1. ID to meet VSWR and contact resistance when mated with .020 ± .001 (.508 ± .0254mm) dia. pin.
2. When fully engaged, the two referene planes must coincide with metal to metal contact.
3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

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Requirement	Detail

General

Material	Brass per QQ-B-626, Comp. 360, half hard. Beryllium copper per ASTM-B-196 PTFE flourocarbon per ASTM-D-1457.
Finish	Center contacts shall be gold plated to a min. thickness of .0001 inch in accordance with MIL-G-45204, Type I, Grade C. All other metal parts shall be finished as to provide a connector which meets the corrosion requirements.
Design	The design shall be such that the outline and interface dimensions shown in this catalog are met.

Electrical

Frequency	dc to 10 GHz.
Insulation Resistance	1,000 megohms min.
Corona Level at 70,000 ft.	RG 178 cable or equivalent 185 volts min. RG 316 cable or equivalent 250 volts min.
Dielectric Withstanding Voltage At Sea Level	Straight connector, non-cabled, 1,000 volts. RG 178 cable or equivalent 750 volts. RG 316 cable or equivalent 1,000 volts.
RF High Potential at 5 MHz	Straight connector, solder pot, 600 volts RMS. RG 178 cable or equivalent 500 volts RMS. RG 316 cable or equivalent 700 volts RMS.
Voltage Rating	Straight connector, non-cabled: Sea Level 335 volts, 70,000 Ft. 85 volts. RG 178 cable or equivalent: Sea Level 250 volts, 70,000 Ft. 60 volts. RG 316 cable or equivalent: Sea Level 335 volts, 70,000 Ft. 85 volts.
Center Contact Resistance	Straight connector 6.0 milliohms. Right angle connector 12.0 milliohms.
VSWR	Straight connector RG 178 cable or equivalent 1.20 + .04f(GHz). Straight connector RG 316 cable or equivalent 1.15 + .04f(GHz). Right angle connector RG 178 cable or equivalent 1.35 + .06f(GHz). Right angle connector RG 316 cable or equivalent 1.25 + .04f(GHz).
Insertion Loss	Straight cable connector .25 dB max. at 4 GHz. Right angle cable connector .50 dB max. at 4 GHz.

Mechanical

Force to Engage	16 in.-ozs. max. to engage and disengage. Longitudinal force is not applicable.
Coupling Nut Retention	35 lbs. min. Applicable to female connectors only.
Coupling Proof Torque	100 in.-ozs. Applicable to female connectors only.
Mating Characteristics	Applicable to female connectors only. Oversize test pin .0215 min. dia., .050 deep; insertion force 2.5 lbs. max. with .021 min. dia. pin; withdrawal force 1 oz. min. with .019 max. dia. pin.
Connector Durability	500 insertion and withdrawal cycles at 12 cycles per minute max.
Recommended Mating Torque	30-50 in.-ozs.

Environmental

Temperature Range	-65°C to +165°C.
Vibration	Per MIL-STD-202, method 204, test condition D.
Shock	Per MIL-STD-202, method 213, test condition C.
Corrosion (Salt Spray)	Per MIL-STD-202, method 101, test condition B.

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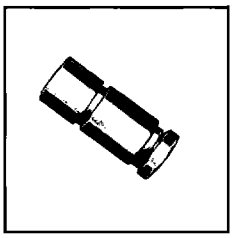
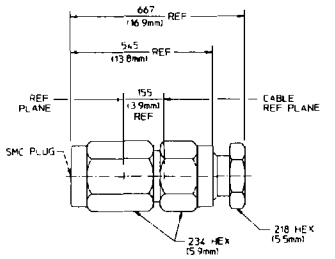
Clamp Attachment

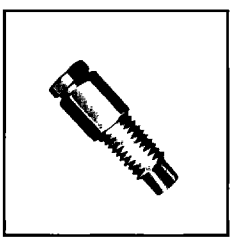


Straight Cable Plug

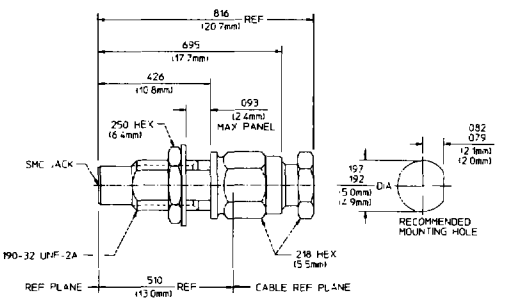


Captured Center Contact		
Cable	RG174/U, 188, 316	RG 178/U, 196
Part Number	5001-5015-09	5001-5027-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

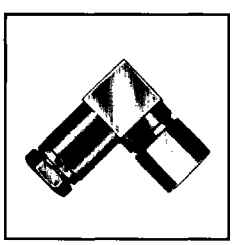


Bulkhead Feedthrough Cable Jack

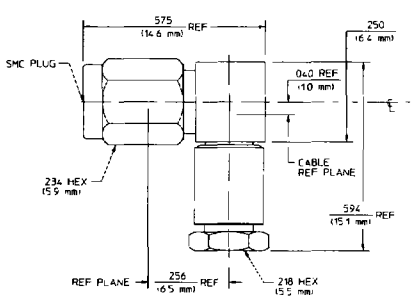


Captured Center Contact		
Cable	RG174/U, 188, 316	RG 178/U, 196
Part Number	5004-5005-09	5004-5012-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics



Right Angle Cable Plug



Captured Center Contact		
Cable	RG174/U, 188, 316	RG 178/U, 196
Part Number	5007-5008-09	5007-5016-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
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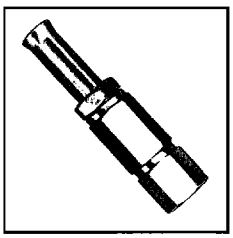
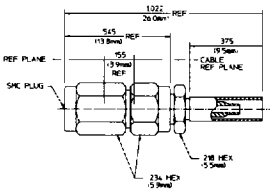
Crimp Attachment

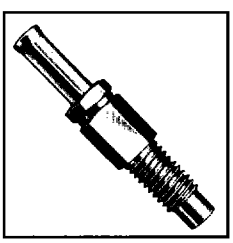


Straight Cable Plug

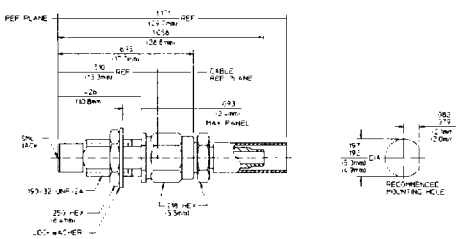


Captured Center Contact		
Cable	RG174/U, 188, 316	RG 178/U, 196
Part Number	5031-5014-09	5031-5007-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

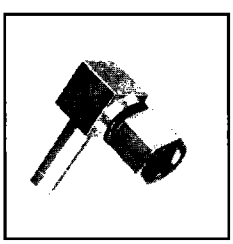


Bulkhead Feedthrough Cable Jack

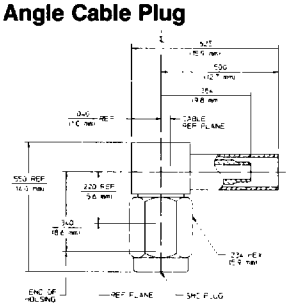


Captured Center Contact		
Cable	RG174/U, 188, 316	RG 178/U, 196
Part Number	5034-5006-09	5034-5005-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics



Right Angle Cable Plug



Captured Center Contact		
Cable	RG174/U, 188, 316	RG 178/U, 196
Part Number	5037-7188-09	5037-7196-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.
Refer to Appendix for Coaxial Cable Characteristics

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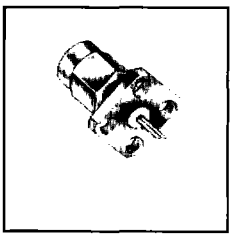
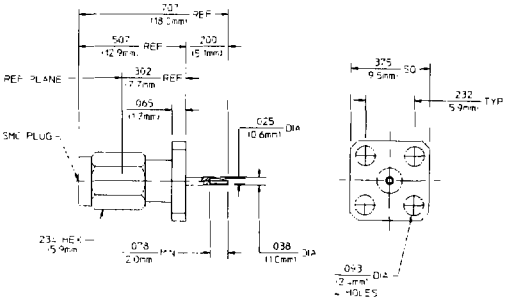
Flange Mount Plug Receptacle

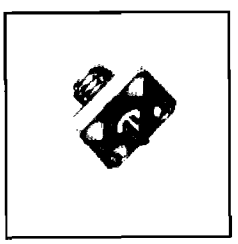


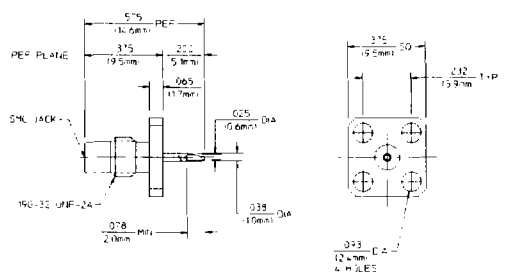


Captured Center Contact Solder Pot Terminal	
Part Number	**5051-0000-09**

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

Flange Mount Jack Receptacle

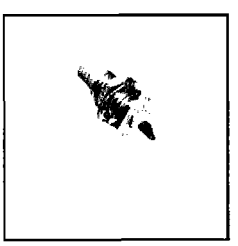


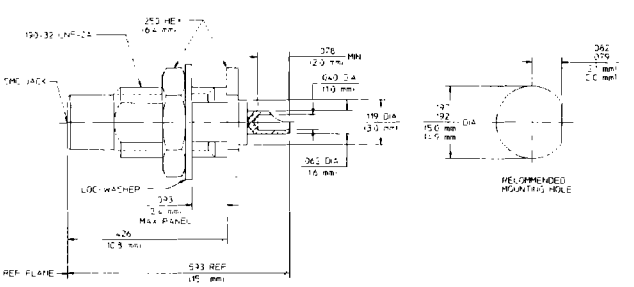


Captured Center Contact Solder Pot Terminal	
Part Number	**5052-0000-09**

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

Rear Mount Bulkhead Feedthrough Jack Receptacle

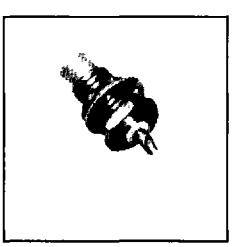


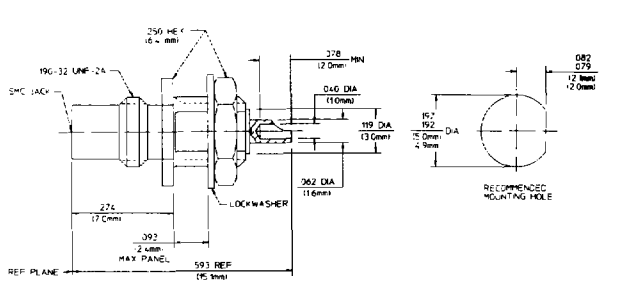


Captured Center Contact Solder Pot Terminal	
Part Number	**5056-0000-09**

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

Front Mount Bulkhead Feedthrough Jack Receptacle





Captured Center Contact Solder Pot Terminal	
Part Number	**5058-0000-09**

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

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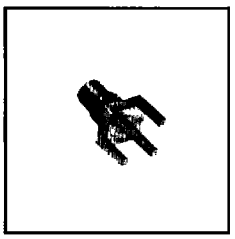
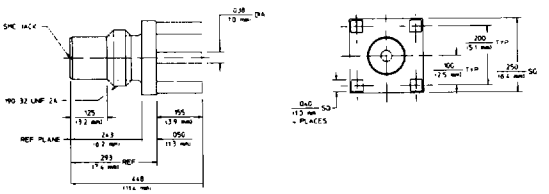
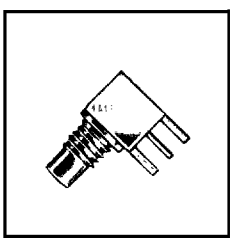


Straight Jack Receptacle

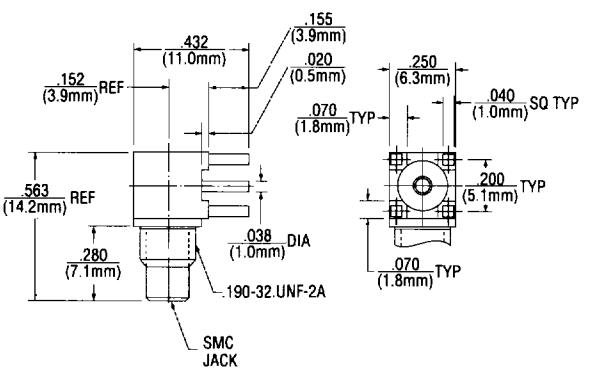


Part Number	5062-5003-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



Right Angle Jack Receptacle



Part Number	5064-5003-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

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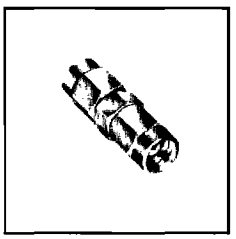
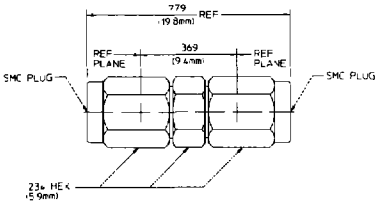
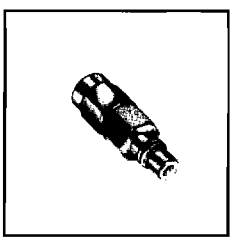


Plug to Plug

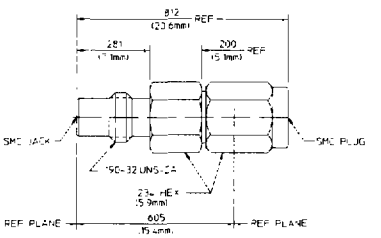


Part Number	5081-0000-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

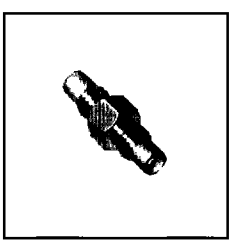


Plug to Jack

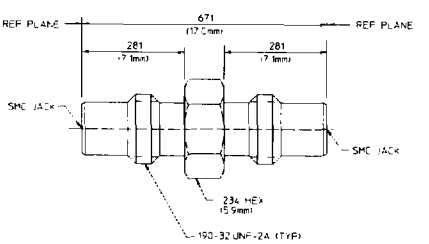


Part Number	5082-0000-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

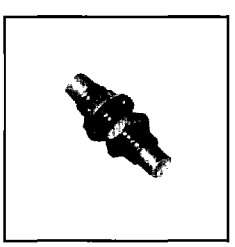


Jack to Jack

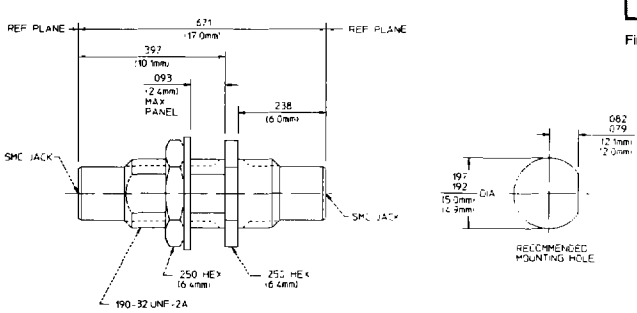


Part Number	5080-0000-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



Bulkhead Feedthrough Jack to Jack



Part Number	5084-0000-09

Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

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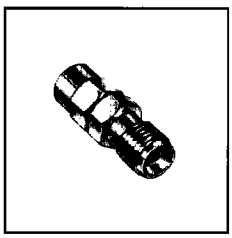
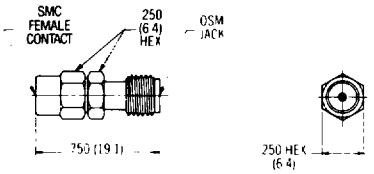
SMC to OSM(SMA)

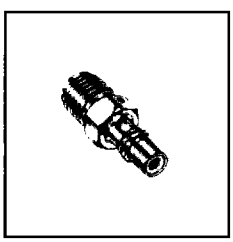


SMC Plug to OSM Jack

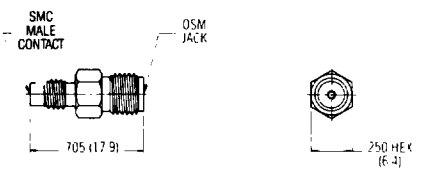


DC-10.0 GHz Max. VSWR 1.04 + .007fGHz	
Part Number	**5082-2240-00**

Finish: Passivated stainless steel.

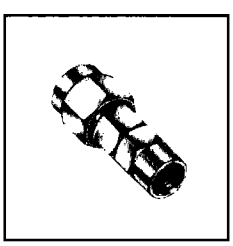


SMC Jack to OSM Jack

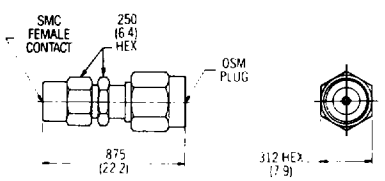


DC-10.0 GHz Max. VSWR 1.04 + .007fGHz	
Part Number	**5080-2240-00**

Finish: Passivated stainless steel.

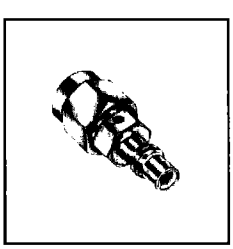


SMC Plug to OSM Plug

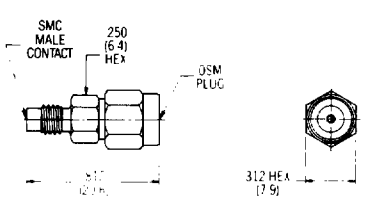


DC-10.0 GHz Max. VSWR 1.03 + .007fGHz	
Part Number	**5081-2241-00**

Finish Passivated stainless steel



SMC Jack to OSM Plug



DC-10.0 GHz Max. VSWR 1.03 + .007fGHz	
Part Number	**5082-2241-00**

Finish Passivated stainless steel.

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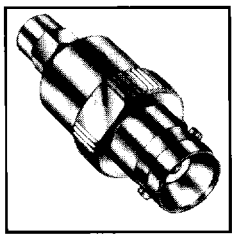
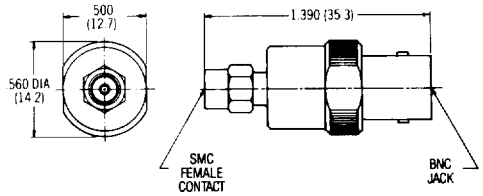
SMC to BNC

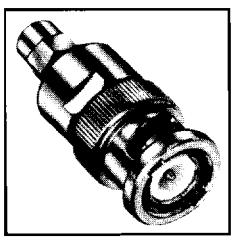


SMC Plug to BNC Jack

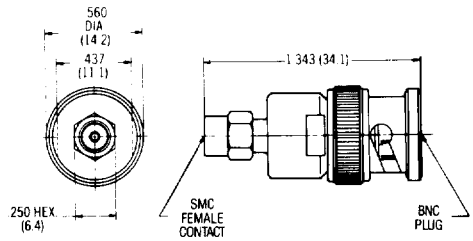


Part Number	3282-2221-00

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel

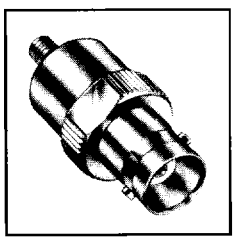


SMC Plug to BNC Plug

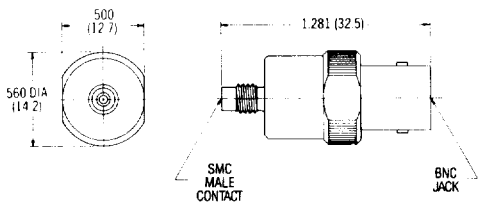


Part Number	3281-2221-00

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel

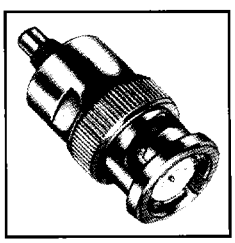


SMC Jack to BNC Jack

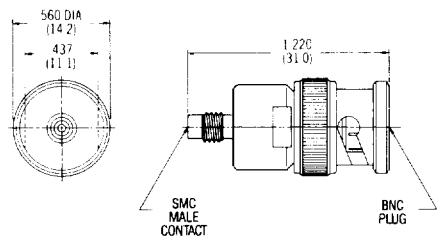


Part Number	3280-2222-00

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel



SMC Jack to BNC Plug



Part Number	3282-2222-00

Finish: BNC: Nickel plated brass,
SMC: Passivated stainless steel

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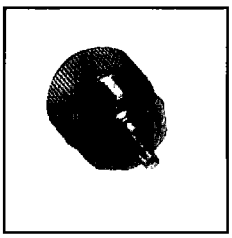
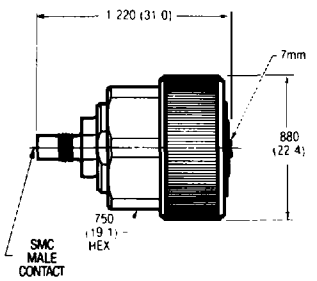
SMC to 7mm

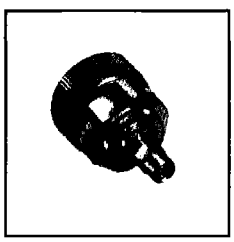


SMC Jack to 7mm

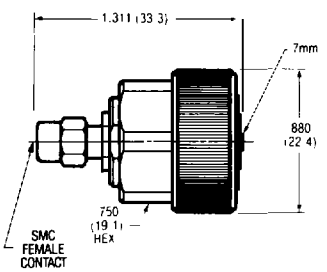


DC-12.4 GHz Max. VSWR 1.015 + .004fGHz	
Part Number	5082-2700-00
Full Fluted Connector	
Part Number	7482-2222-00

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Standard 7mm contact is 4 slotted. Consult factory for 6 slotted version used with HP8510 test equipment
Finish: 7mm: Electropolished stainless steel,
SMC: Passivated stainless steel



SMC Plug to 7mm



DC-12.4 GHz Max. VSWR 1.015 + .004fGHz	
Part Number	5081-2700-00
Full Fluted Connector	
Part Number	7481-2221-00

Conforms to the mechanical and electrical requirements of the Standard Test Connector MIL-C-39012/B Amendment 1.
Standard 7mm contact is 4 slotted. Consult factory for 6 slotted version used with HP8510 test equipment
Finish. 7mm: Electropolished stainless steel,
SMC: Passivated stainless steel

North America: Tel. (800) 366-2266 Fax (800) 618-8883 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 Fax +81 (03) 3226-1451 ■ Europe: Tel. +44 (1344) 869 595 Fax +44 (1344) 300 020