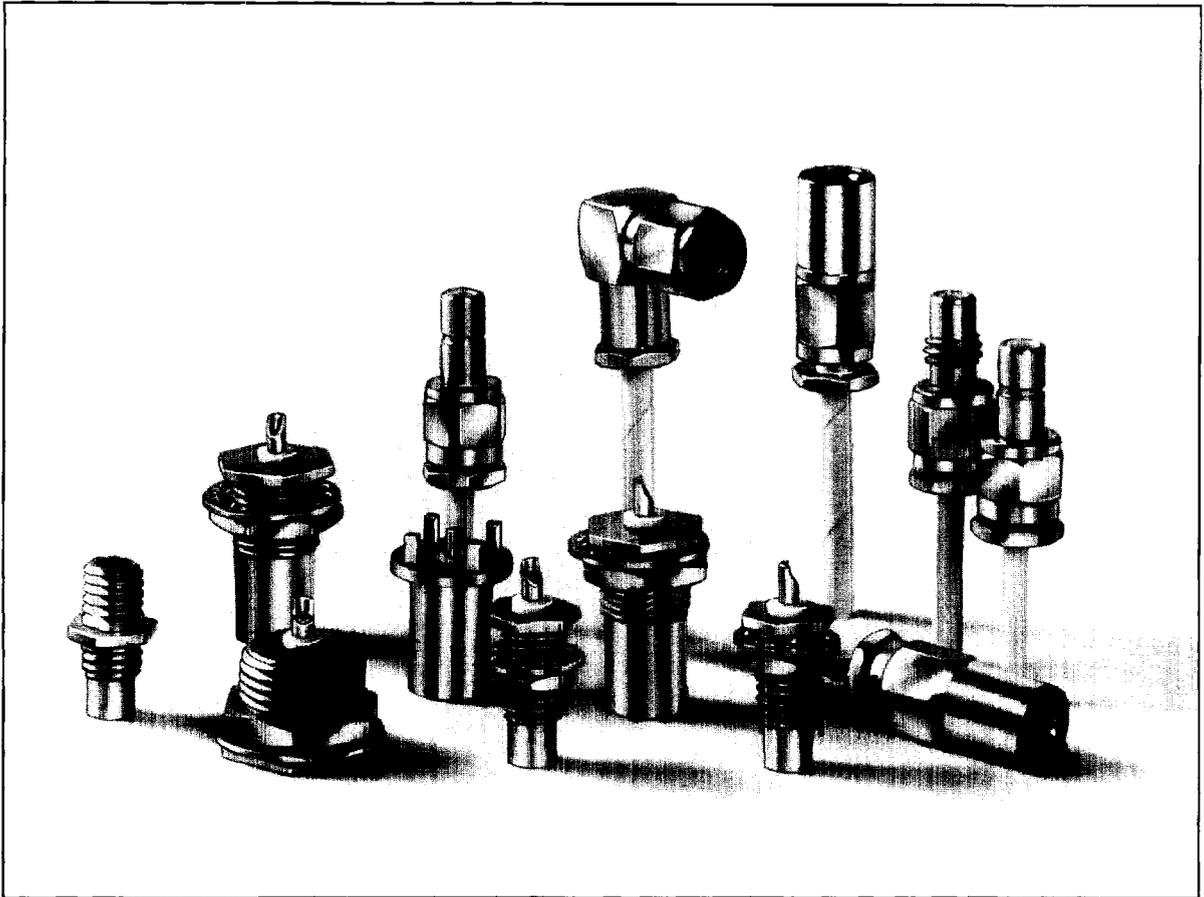




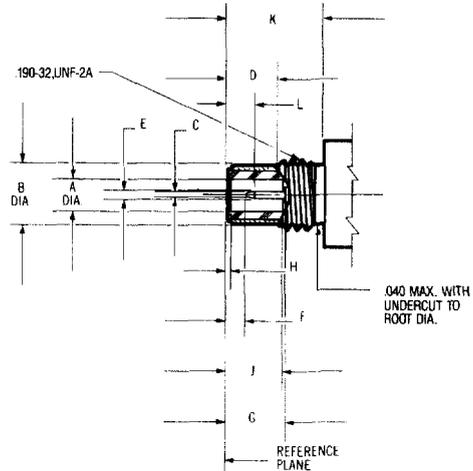
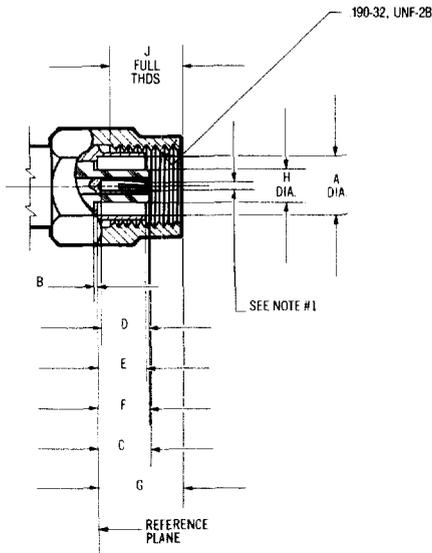
## Screw-On Subminiature Coaxial Connectors



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.

### Table of Contents

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### FEMALE

Letter	Inches (Millimeters) <sup>3</sup>	
	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) <sup>3</sup>	
	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 reference planes must coincide with metal to metal contact.  
 3. Metric equivalents (to the nearest 0.01mm) are given for general information only.

Requirement	Detail
-------------	--------

### General

Material	Brass per QQ-B-626, Comp. 360, half hard. Beryllium copper per ASTM-B-196 PTFE fluorocarbon 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	<table><thead><tr><th></th><th>Sea Level</th><th>70,000 Ft.</th></tr></thead><tbody><tr><td>Straight connector, non-cabled</td><td>335 volts</td><td>85 volts.</td></tr><tr><td>RG 178 cable or equivalent</td><td>250 volts</td><td>60 volts.</td></tr><tr><td>RG 316 cable or equivalent</td><td>335 volts</td><td>85 volts.</td></tr></tbody></table>		Sea Level	70,000 Ft.	Straight connector, non-cabled	335 volts	85 volts.	RG 178 cable or equivalent	250 volts	60 volts.	RG 316 cable or equivalent	335 volts	85 volts.
	Sea Level	70,000 Ft.											
Straight connector, non-cabled	335 volts	85 volts.											
RG 178 cable or equivalent	250 volts	60 volts.											
RG 316 cable or equivalent	335 volts	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.												

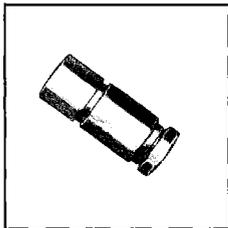
### Mechanical

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.

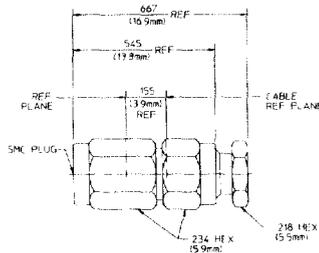
### Environmental

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.

## Clamp Attachment

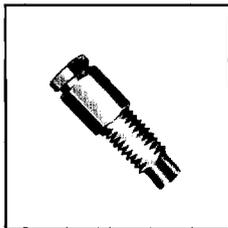


**Straight Cable Plug**

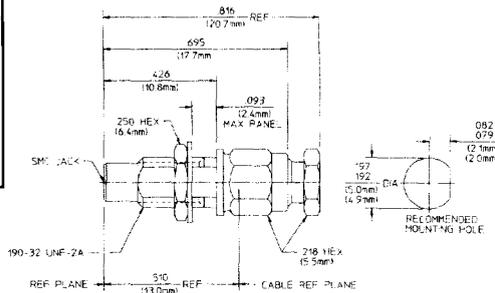


Captured Center Contact		
Cable	RG174/U, 188, 316	RG 178/U, 196
Part Number	5001-5015-09	5001-5027-09

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

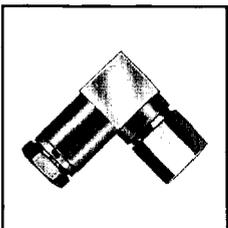


**Bulkhead Feedthrough Cable Jack**

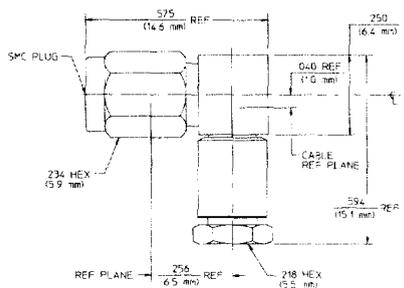


Captured Center Contact		
Cable	RG174/U, 188, 316	RG 178/U, 196
Part Number	5004-5005-09	5004-5012-09

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

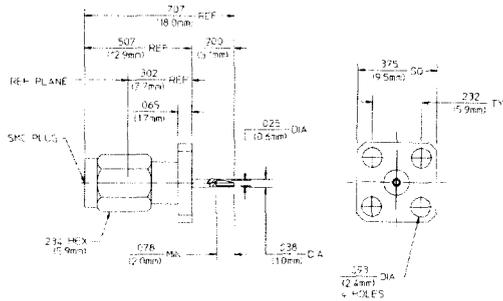
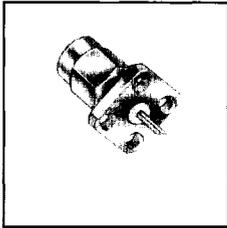
Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.  
Refer to Appendix for Coaxial Cable Characteristics





# Panel Mount Receptacles

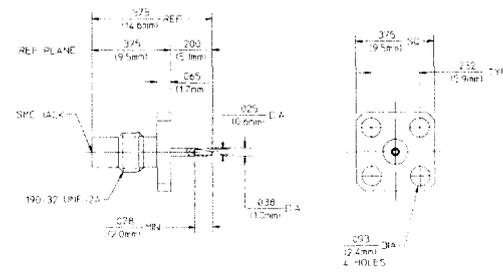
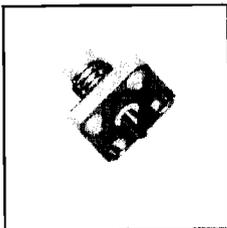
## Flange Mount Plug Receptacle



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.

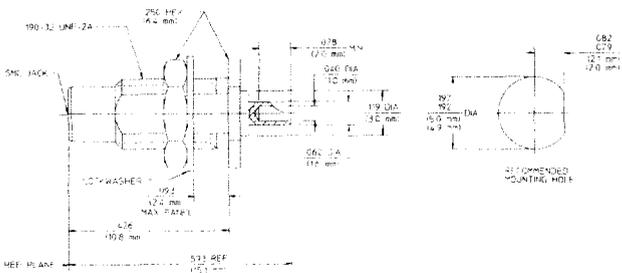
## Flange Mount Jack Receptacle



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.

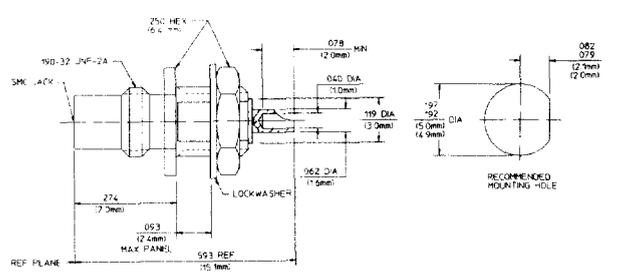
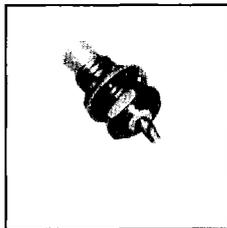
## Rear Mount Bulkhead Feedthrough Jack Receptacle



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

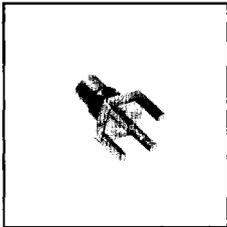
Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

## Front Mount Bulkhead Feedthrough Jack Receptacle

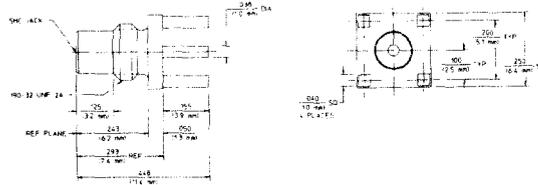


Captured Center Contact Solder Pot Terminal	
Part Number	5058-0000-09

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

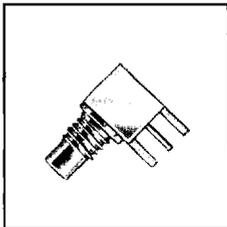


### Straight Jack Receptacle

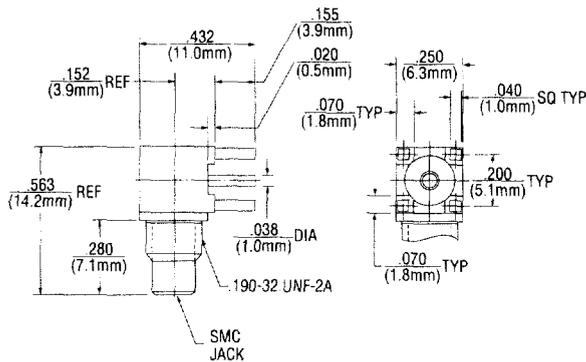


Part Number	5062-5003-09
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Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



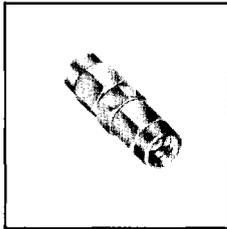
### Right Angle Jack Receptacle



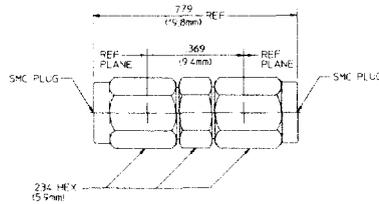
Part Number	5064-5003-09
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Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

# SMC In-Series Adapters

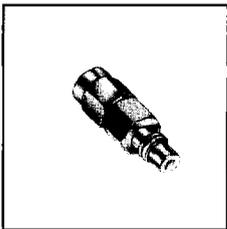


**Plug to Plug**

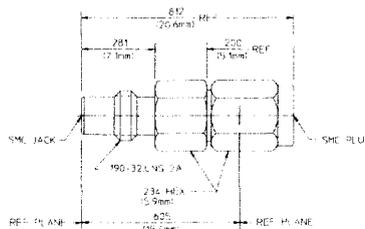


Part Number	5081-0000-09
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Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

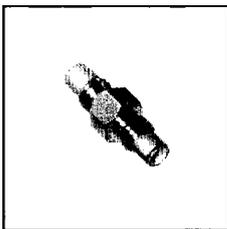


**Plug to Jack**

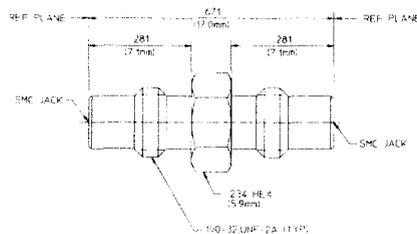


Part Number	5082-0000-09
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Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

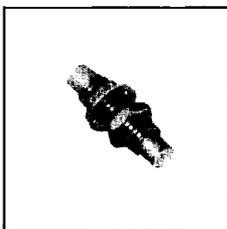


**Jack to Jack**

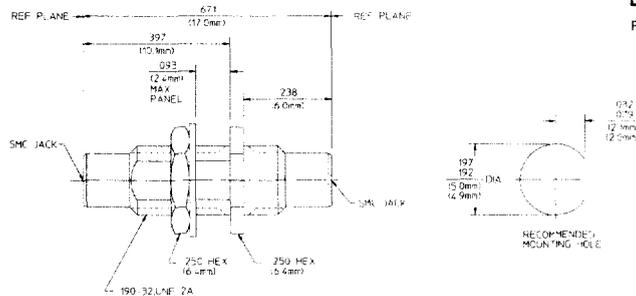


Part Number	5080-0000-09
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Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.



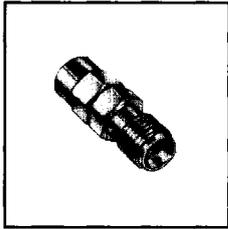
**Bulkhead Feedthrough Jack to Jack**



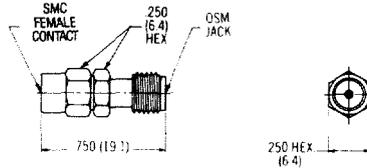
Part Number	5084-0000-09
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Finish: Gold plate. For nickel plate, change the Part number from -09 to -10.

### SMC to OSM(SMA)

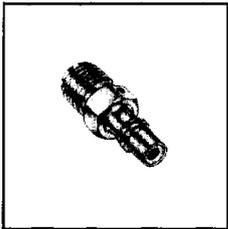


**SMC Plug to OSM Jack**

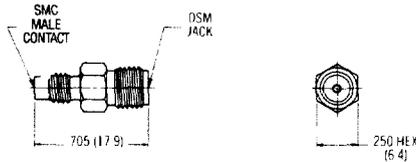


DC-10.0 GHz	
Max. VSWR 1.04 + .007fGHz	
<b>Part Number</b>	<b>5082-2240-00</b>

Finish: Passivated stainless steel.

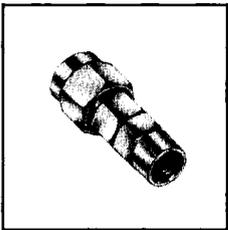


**SMC Jack to OSM Jack**

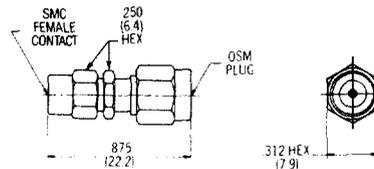


DC-10.0 GHz	
Max. VSWR 1.04 + .007fGHz	
<b>Part Number</b>	<b>5080-2240-00</b>

Finish: Passivated stainless steel.

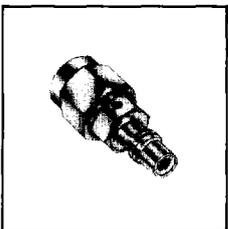


**SMC Plug to OSM Plug**

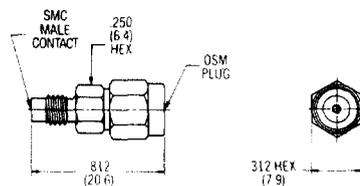


DC-10.0 GHz	
Max. VSWR 1.03 + .007fGHz	
<b>Part Number</b>	<b>5081-2241-00</b>

Finish: Passivated stainless steel.



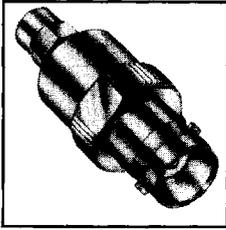
**SMC Jack to OSM Plug**



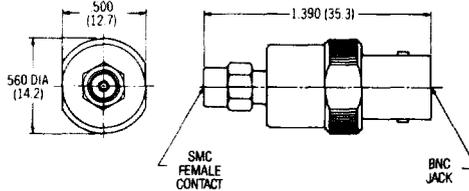
DC-10.0 GHz	
Max. VSWR 1.03 + .007fGHz	
<b>Part Number</b>	<b>5082-2241-00</b>

Finish: Passivated stainless steel.

### SMC to BNC

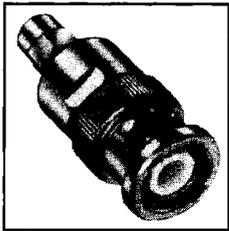


**SMC Plug to BNC Jack**

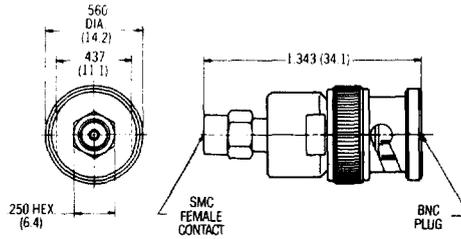


**3282-2221-00**

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

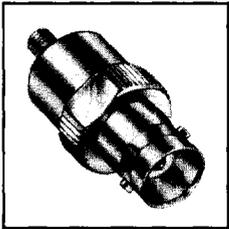


**SMC Plug to BNC Plug**

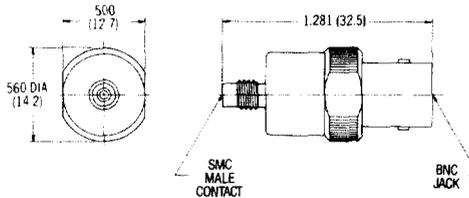


**3281-2221-00**

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

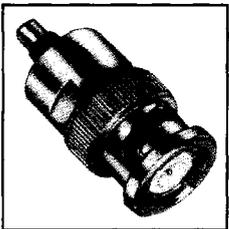


**SMC Jack to BNC Jack**

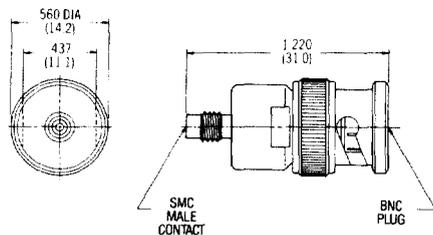


**3280-2222-00**

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



**SMC Jack to BNC Plug**



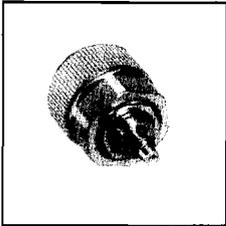
**3282-2222-00**

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

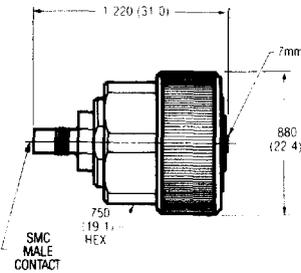


# Between-Series Adapters

## SMC to 7mm

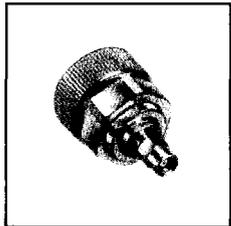


### SMC Jack to 7mm

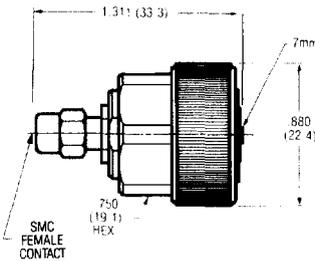


DC-12.4 GHz	
Max. VSWR 1.015 + .004fGHz	
Part Number	5082-2700-00
Full Fluted Connector	
Part Number	7482-2222-00

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