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Jameco Part Number 739497

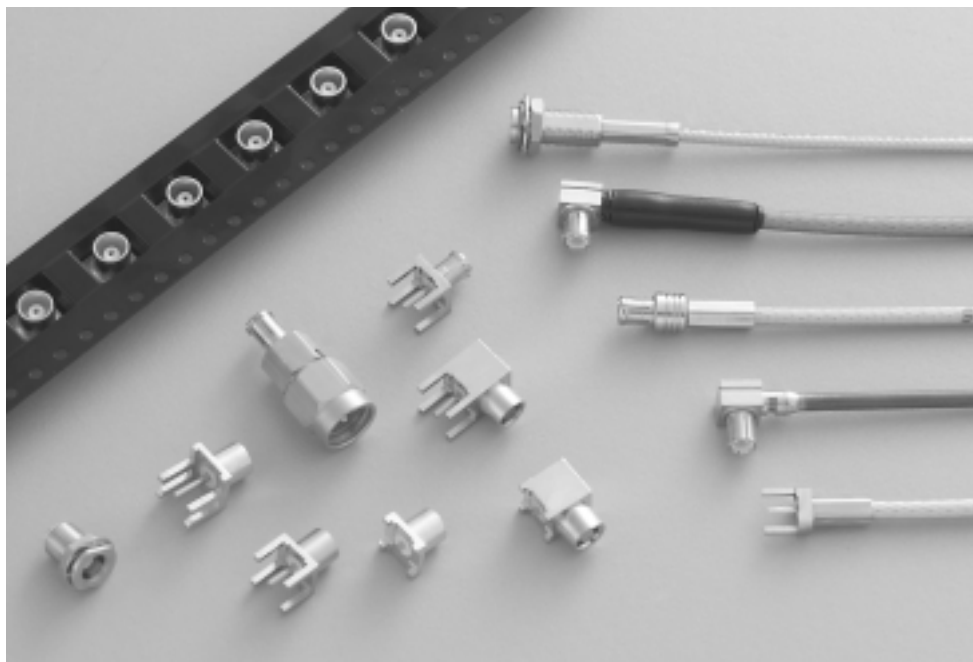


RF Coax Connectors

MCX Connectors

Features

- Snap-on interface facilitates assembly
- Conforms to CECC interface specifications for MCX
- 30% smaller than SMB connectors
- Surface mount tape and reel for high volume



Between Series Adapters

For MCX Between Series Adapters, see Pages 255-264.

AMP MCX microminiature snap-on connectors offer an excellent blend of size, durability and performance for emerging applications in GPS, automotive and wireless communications. MCX connectors are 30% smaller than traditional snap-on SMB connectors, offering greater packaging density and weight reduction. MCX connectors are mechanically robust with beryllium copper spring fingers rated at a minimum of 500 mating cycles. The snap-on interface facilitates assembly, eliminating the need for a threaded connection, and

ensuring full engagement. The forces to engage and disengage have been optimized to ensure ease of mating as well as to prevent damage to PCB solder connections. MCX connectors are designed for broad band performance, DC-6 GHz, and can be utilized for future system upgrades without concerns for performance degradation. AMP MCX connectors are fully mateable with standard MCX connectors and conform to the CECC interface specifications.

MCX connectors are available in a broad range of

standard configurations for commercial applications. Tape and reel packaging for MCX surface mount straight and right angle PCB receptacles is available to facilitate high volume pick and place manufacturing. MCX surface mount connectors are designed to withstand infrared reflow, convection and vapor phase soldering and provide a .254 [.010] standoff for optimal board cleaning. MCX plug and jack PCB receptacles also offer a direct board to board solution providing a nominal 7.11 [0.28] separation.



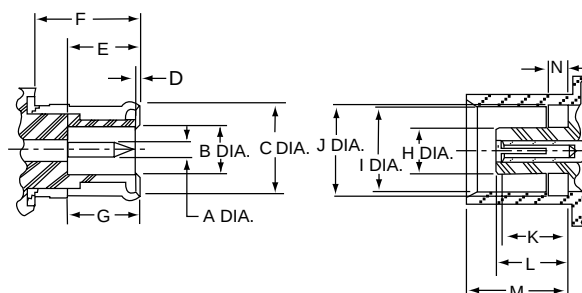
RF Coax Connectors

MCX Connectors (Continued)

Specifications

General		CECC 22220 PARA
Materials	—	Brass alloys UNS C36000 (ASTM-B16) or C38500 per QQ-B626, Beryllium copper per ASTM B-196, PTFE fluorocarbon per ASTM-D-1457
Finish	—	Center Contacts: Gold plated (MIL-G-45204) over nickel plate (QQ-N-290)
	—	Outer Contacts: Gold plated (MIL-G-45204) over nickel plate (OO-N-290)
	—	Housings: Nickel plated (QQ-N-290), tin lead (MIL-P-81728) or Gold plated (MIL-G-45204)
	—	All other metal parts shall be furnished so as to provide a connector which meets corrosion requirements of CECC 22220 PARA 4.6.10
Design	—	The design shall be such that the outline and interface dimensions shown in this catalog and the requirements of CECC 22220 PARA are met
Electrical		CECC 22220 PARA (General requirements performance may vary by cable)
Frequency	—	dc - 6 GHz
Nominal Impedance	—	50 ohms
Voltage Rating	—	335 Volts (VRMS Maximum) @ Sea Level
VSWR	4.4.1	1.25:1 Maximum @ 4 GHz
	—	1.35:1 Maximum @ 6 GHz
Insulation Resistance	4.4.4	10,000 Megohms Minimum
Insertion Loss	—	.1dB Maximum/1000 MHz
Dielectric Withstanding Voltage	4.4.5	1000 Volts (VRMS Minimum) @ Sea Level
Contact Resistance		
Center Contact	4.4.2	5.0 Milliohms Maximum
Outer Contact	4.4.3	1.0 Milliohms Maximum
Corona 70,000 ft.	—	250 Volts (VRMS Minimum) @ MHz
RF High Potential @ Sea Level	—	670 Volts (VRMS Minimum) @ MHz
Contact Current	—	1.5 ADC Max
Mechanical		CECC 22220 PARA
Force to Engage	4.5.4	15.5 N [3.4 lbs.] Maximum
Force to Disengage	—	8 – 20 N [1.8 – 4.5 lbs.]
Contact Captivation	4.5.2	Designed to maintain MCX interface when mating 10 N [2.2 lbs.] axial
Connector Durability	4.7.1	500 insertion and withdrawal cycles
Environmental		CECC 22220 PARA
Temperature Rating	—	-65°C + 165°C
Vibration	4.6.3	MIL-STD-202, Method 204, Condition D
Moisture Resistance	4.6.4	MIL-STD-202, Method 106
Corrosion	4.6.10	MIL-STD-202, Method 101, Condition B, 48 Hours
Thermal Shock	4.6.7	MIL-STD-202, Method 107, Condition C

Meets or exceeds requirements of CECC 22220. AMP has design control and all data contained herein is subject to change without notice. Contact AMP for specifications on other connector types.



Plug

Letter	Minimum	Maximum
A	0.48 [.0189]	0.53 [.0208]
B	2.00 [.0788]	—
C	—	3.8 [.148]
D	0.00 [.000]	0.30 [.0118]
E	2.80 [.111]	3.20 [.125]
F	4.15 [.164]	—
G	2.80 [.111]	—

Jack

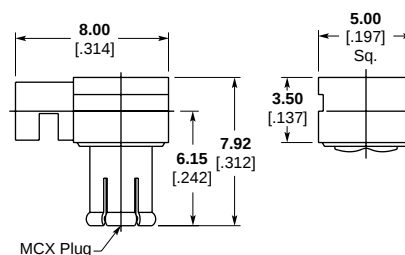
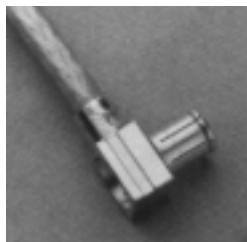
Letter	Minimum	Maximum
H	—	1.98 [.077]
I	3.42 [.135]	3.48 [.137]
J	3.60 [.142]	3.75 [.147]
K	2.30 [.091]	2.80 [.110]
L	2.60 [.103]	2.80 [.110]
M	4.00 [.158]	4.12 [.162]
N	0.75 [.0296]	0.85 [.0334]



RF Coax Connectors

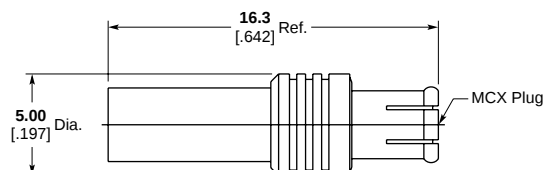
MCX Connectors (Continued)

Right Angle Cable Plug, Solder



Cable	Plating	M/A-COM Model No.	Part No.
RG-174/U, 188/U, 316/U	Gold	5807-5001-09	1060788-1

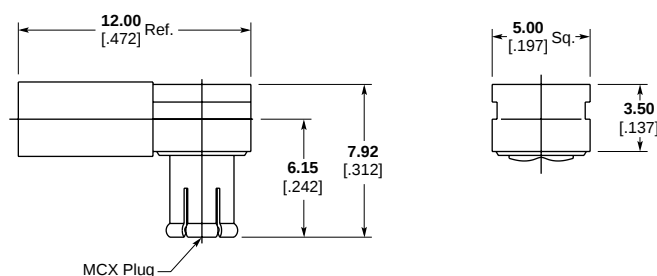
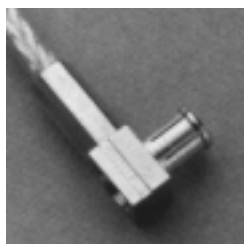
Straight Cable Plug, Crimp



Cable	Plating	M/A-COM Model No.	Part No.
RG-178/U, 196/U	Nickel	5831-5002-10	1060869-1
	Gold	5831-5002-09	1060868-1
RG-174/U, 188/U, 316/U	Nickel	5831-5003-10	1060872-1
	Gold	5831-5003-09	1060871-1
RD-316	Nickel	5831-7316-10	1060875-1
	Gold	5831-7316-09	1060875-2

Note: For full crimp attachment consult AMP

Right Angle Cable Plug, Crimp



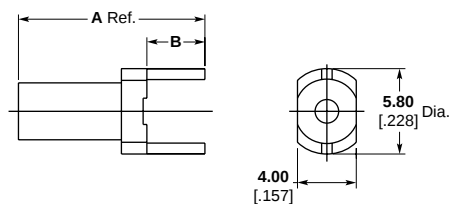
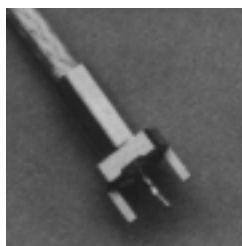
Cable	Plating	M/A-COM Model No.	Part No.
RG-178/U, 196/U	Nickel	5837-5030-10	1329293-1
	Gold	5837-5030-09	1329293-2
RG-188/U, 316/U RG-179/U, RG-187/U	Nickel	5837-5025-10	1330723-1
	Gold	5837-5025-09	1330723-3
RD-316	Nickel	5837-5031-10	1363301-1
	Gold	5837-5031-09	1363301-2



RF Coax Connectors

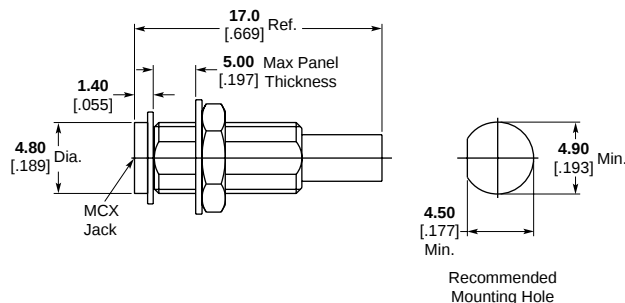
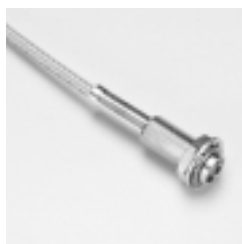
MCX Connectors (Continued)

Straight Cable Terminal, PC Board, Without Center Contact



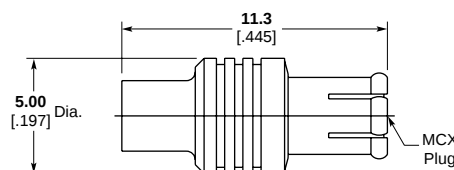
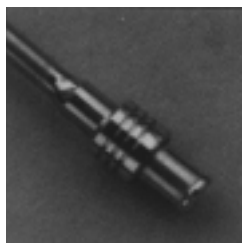
Cable	Dim. A	Dim. B	Plating	M/A-COM Model No.	Part No.
RG-174/U, 188/U, 316/U	11.76 .463	3.94 .155	Nickel	5818-5002-10	1060811-1
			Gold	5818-5002-09	1060811-2
	10.74 .423	2.92 .115	Nickel	5818-5003-10	1060813-1
			Gold	5818-5003-09	1060813-2
RG-178, 196/U	12.01 .473	3.94 .155	Nickel	5818-5004-10	1060815-1
			Gold	5818-5004-09	1060815-2
	11.00 .433	2.92 .115	Nickel	5818-5005-10	1060817-1
			Gold	5818-5005-09	1253777-1

Bulkhead Cable Jack



Cable	Plating	M/A-COM Model No.	Part No.
RG-178/U, RG-196/U	Nickel	5834-7396-10	1060884-1
	Gold	5834-7396-09	1060884-2
RG-188/U, RG-316/U	Nickel	5834-7388-10	1060883-1
	Gold	5834-7388-09	1060882-1
RD-316	Nickel	5834-7316-10	1060881-1
	Gold	5834-7316-09	1060881-2

Straight Cable Plug, Direct Solder Attachment For Semi-Rigid Cable 2.16 [.085] Dia.



Cable	Plating	M/A-COM Model No.	Part No.
RG-405/U [.085]	Gold	5801-7985-09	1060772-1
.047	Gold	5801-7947-09	1060772-2

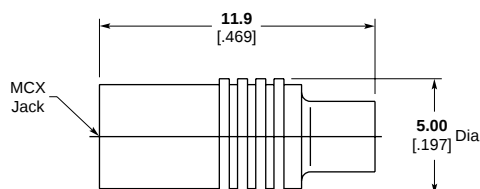


RF Coax Connectors

MCX Connectors (Continued)

Straight Cable Jack, Direct Solder Attachment

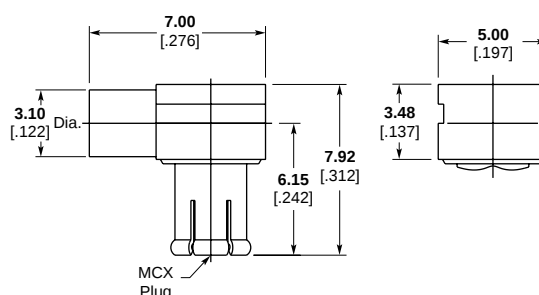
2.16 [.085] Dia.



Cable	Plating	M/A-COM Model No.	Part No.
RG-405/U [.085]	Gold	5802-7985-09	1060774-1
.047	Gold	5802-7947-09	1060774-2

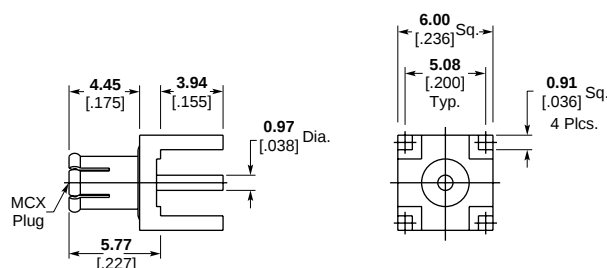
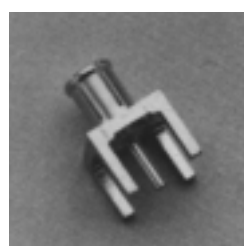
Right Angle Plug Receptacle, Direct Solder Attachment

For Semi-Rigid Cable
2.16 [.085] Dia.



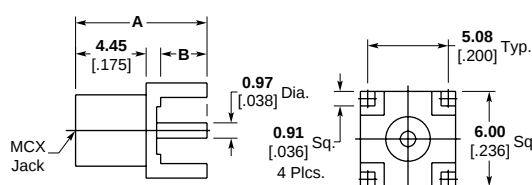
Cable	Plating	M/A-COM Model No.	Part No.
RG-405/U	Gold	5807-7985-09	1060787-1

Vertical Plug Receptacle, PC Board



Plating	M/A-COM Model No.	Part No.
Nickel	5863-0000-10	1061015-1
Gold	5863-0000-09	1085221-1

Vertical Jack Receptacle, PC Board



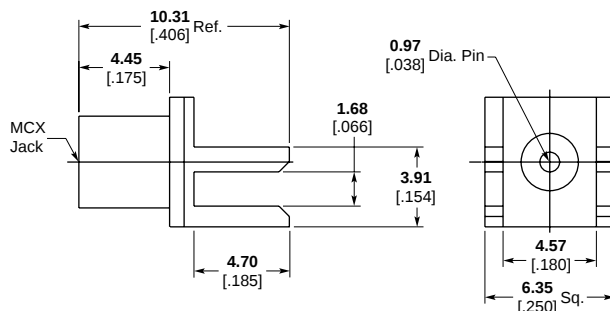
Dim. A	Dim. B	Plating	M/A-COM Model No.	Part No.
8.28	2.92	Nickel	5862-5002-10	1060985-1
.326	.115	Gold	5862-5002-09	1060984-1
9.30	3.94	Nickel	5862-5003-10	1060989-1
.366	.155	Gold	5862-5003-09	1330126-1
7.09	1.73	Nickel	5862-5004-10	1060996-1
.279	.068	Gold	5862-5004-09	1060995-1



RF Coax Connectors

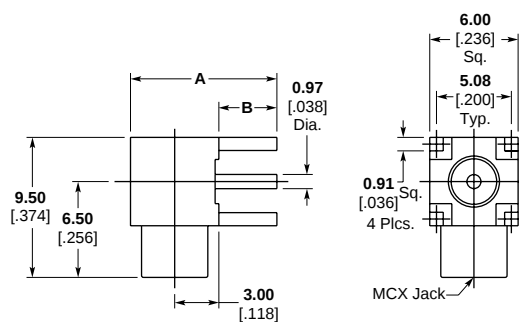
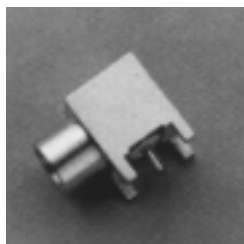
MCX Connectors (Continued)

Vertical End Launch, PC Board



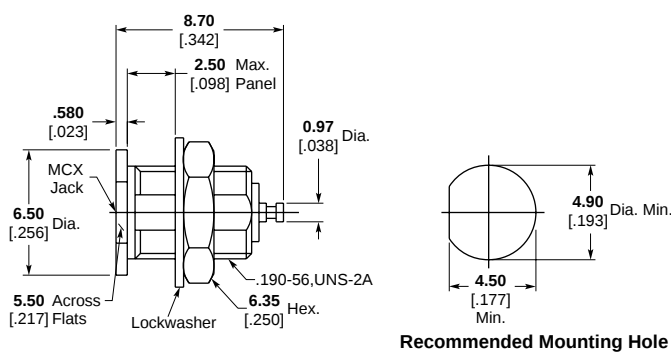
Plating	M/A-COM Model No.	Part No.
Tin Lead	5862-5018-13	1061007-1

Right Angle Jack Receptacle, PC Board



Dim. A	Dim. B	Plating	M/A-COM Model No.	Part No.
9.93 [391]	3.94 [155]	Nickel	5864-5001-10	1061023-1
		Gold	5864-5001-09	1061022-1
7.72 [304]	1.73 [068]	Nickel	5864-5002-10	1061027-1
		Gold	5864-5002-09	1061026-1
8.92 [351]	2.92 [115]	Nickel	5864-5003-10	1061030-1
		Gold	5864-5003-09	1061029-1

Jack Receptacle, Bulkhead Feedthrough



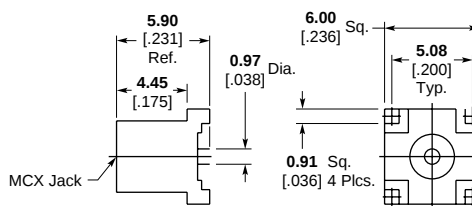
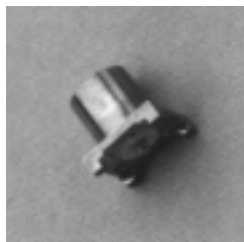
Plating	M/A-COM Model No.	Part No.
Nickel	5858-0000-10	1060960-1
Gold	5858-0000-09	1060959-1



RF Coax Connectors

MCX Connectors (Continued)

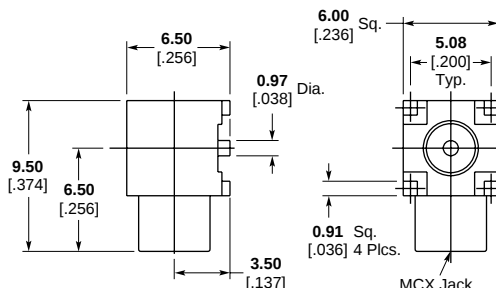
Vertical Jack Receptacle, Surface Mount



Plating	M/A-COM Model No.	Part No.
Tin Lead	5862-5007-13	1061002-1
	5899-5004-54 ¹	1061092-1

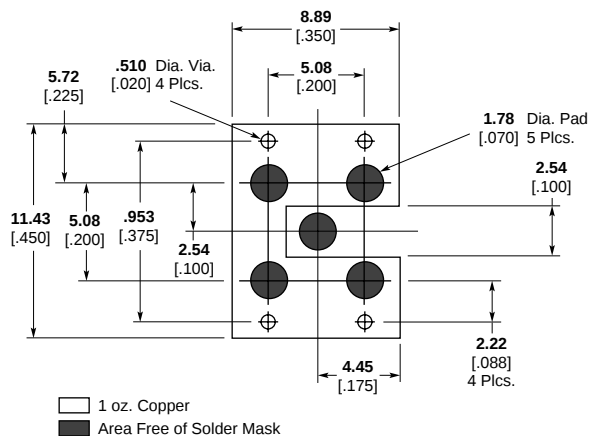
¹Tape and Reel packaging. 900 connectors per reel (carrier width 16mm, carrier pitch 12mm).

Right Angle Jack Receptacle, Surface Mount



Plating	M/A-COM Model No.	Part No.
Tin Lead	5864-5008-13	1061035-1
	5899-5009-54 ¹	1061094-1

¹Tape and reel packaging. 750 connectors per reel (carrier width 24mm carrier pitch 12mm).



Notes:

1. Printed circuit board material: glass epoxy FR-4 or similar; relative permittivity: 4.8, 1 oz. copper clad both sides.
2. These dimensions valid for 1.58 [.062] board thickness.
3. Decimal inch equivalents are shown in parentheses for general information only.

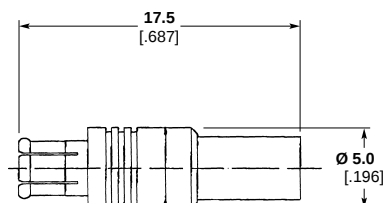
Recommended Mounting Pattern for Microstrip Line



RF Coax Connectors

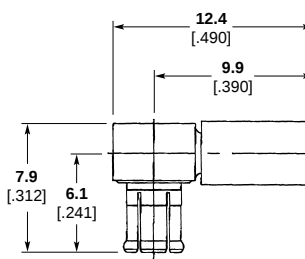
MCX Connectors (Continued)

Straight Cable Plug, Crimp, 75 Ohm



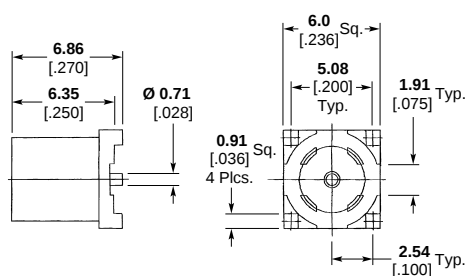
Cable	Plating	M/A-COM Model No.	Part No.
RG 179/U	Nickel	9631-7179-10	1362990-1

Right Angle Cable Plug, Crimp, 75 Ohm



Cable	Plating	M/A-COM Model No.	Part No.
RG 179/U	Nickel	9637-7179-10	1362991-1

Vertical Plug, PC Board, 75 Ohm



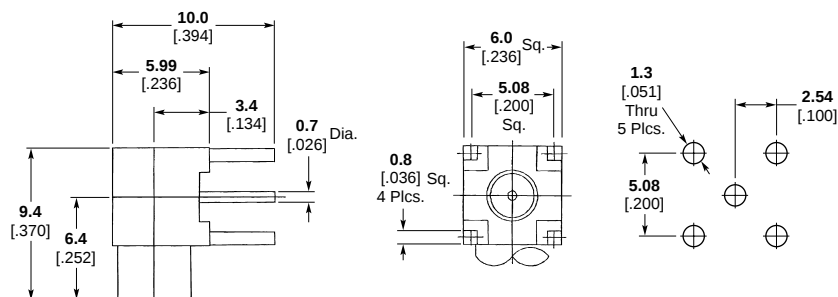
Plating	M/A-COM Model No.	Part No.
Nickel	9662-5000-10	1361169-1



RF Coax Connectors

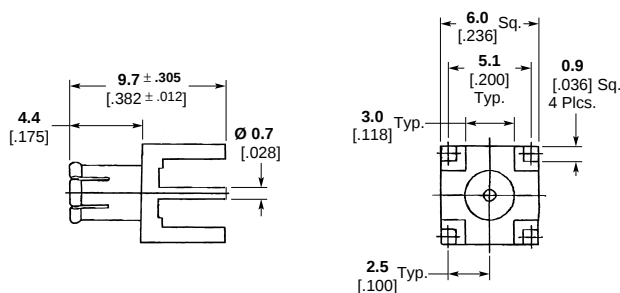
MCX Connectors (Continued)

Vertical Jack, PC Board, 75 Ohm



Plating	M/A-COM Model No.	Part No.
Gold	9664-0000-09	1363106-1

Right Angle Jack, PC Board, 75 Ohm



Plating	M/A-COM Model No.	Part No.
Nickel	9663-0000-10	1362992-1

