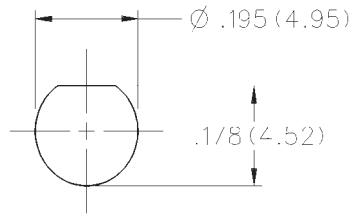


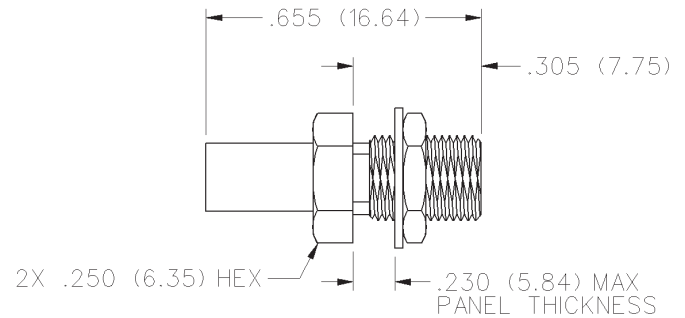
# MCX Reverse Polarity Bulkhead Jack Receptacle - Solder or Crimp Contact



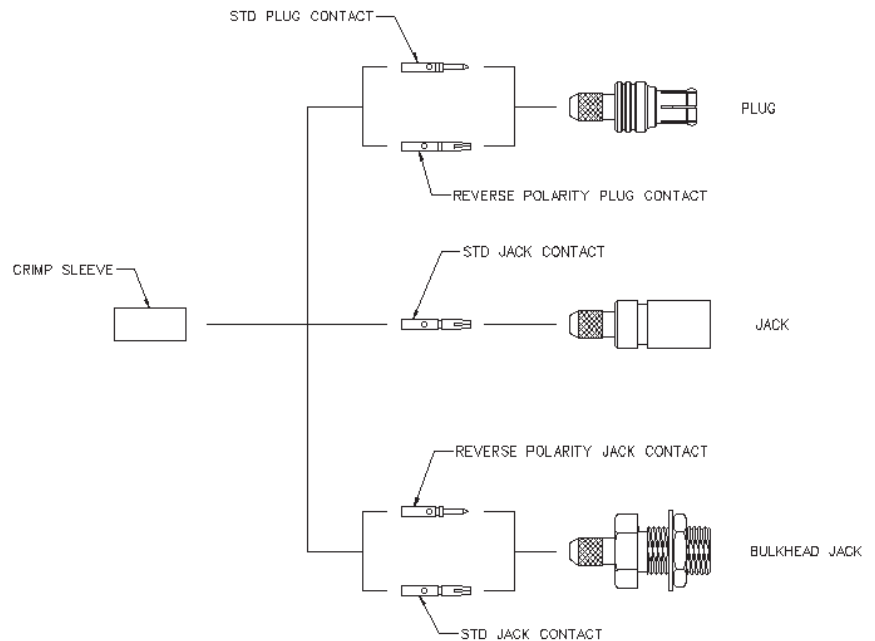
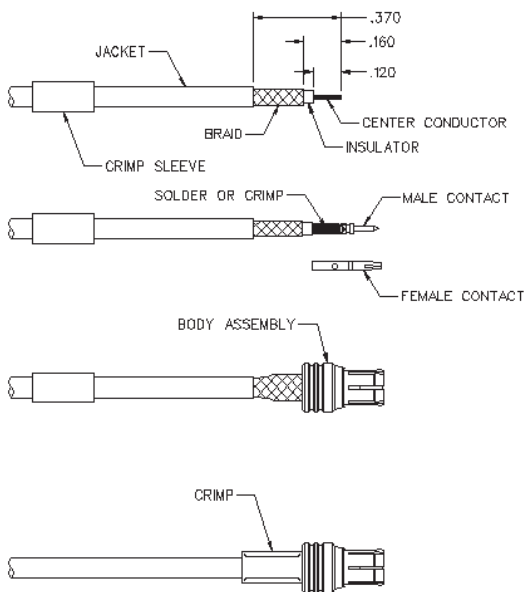
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



Mounting Hole Layout



CABLE TYPE	GOLD PLATED	NICKEL PLATED	CAPTIVATED CONTACT
RG-178/U, 196	133-5302-401	133-5302-406	No



CABLE GROUP	PART NUMBER	CRIMP HEX
RG-178/u, 196	133-5302-401/406	.105 (2.67)

- Identify connector parts. (3 piece parts except bulkhead)
- Strip cable to dimensions shown. Do not nick braid or center conductor. Tin center conductor if contact is to be solder attached. Do not tin center conductor if contact is to be crimp attached. Slide heat shrink (as applicable) and crimp sleeve onto jacket of cable.
- Assemble contact onto cable as shown.
 

**Solder attachment.** Solder contact to center conductor through solder hole using .020 (0.51) diameter solder. Use a minimum of solder for a good joint.

**Crimp attachment.** Crimp contact to center conductor using Johnson Components™ hand tool 140-0000-952 and die set 140-0000-953. Crimp location should be centered between end of contact and cross hole. Crimp attachment to solid center conductor cable is not recommended.
- Flair braid and slide body assembly over contact and under braid. Then seat body assembly firmly onto contact. The cable may have to be held in a clamping fixture. Arrange braid uniformly around crimp stem. Slide crimp sleeve forward and crimp using recommended crimp tool. Slide heat shrink forward and shrink (as applicable).

# MCX Reverse Polarity - 50 Ohm



## Specifications

INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

### ELECTRICAL RATINGS

**Impedance:** 50 Ohms

**Frequency Range:** 0-6 GHz

**VSWR:** (f = GHz)

	Straight Cabled Connectors	Right Angle Cabled Connectors
RG-178 cable	1.17 + .04f	1.07 + .06f
RG-316 cable	1.13 + .04f	1.07 + .04f

Uncabled receptacles ..... N/A

**Working Voltage:** (Vrms maximum)

**Connectors for Cable Type**

Connectors for Cable Type	Sea Level	70K Feet
RG-178	250	65
RG-316 uncabled receptacles	335	85

**Dielectric Withstanding Voltage:** (VRMS minimum at sea level)

Connectors for RG-178	750
Connectors for RG-316 uncabled receptacles	1000

**Corona Level:** (Volts minimum at 70,000 feet)

Connectors for RG-178	190
Connectors for RG-316 uncabled receptacles	250

**Insertion Loss:** (dB maximum, tested at 1 GHz)

Straight cable connectors	0.1 dB
Right angle cable connectors	0.2 dB
Uncabled receptacles	N/A

**Insulation Resistance:** 10000 megohms minimum

**Contact Resistance:** (milliohms maximum)

	After	
	Initial	Environmental
Center contact (straight cabled connectors, uncabled receptacles)	5.0	8.0
Center contact (right angle cabled connectors)	5.0	15.0
Outer contact	1.0	1.5
Braid to body (gold plated connectors)	1.0	N/A
Braid to body (nickel plated connectors)	2.5	N/A

**RF Leakage:** (dB typical tested at 2.5 GHz)

Cable connectors	-55 dB
Uncabled receptacles	N/A

**RF High Potential Withstanding Voltage:** (Vrms minimum, tested at 4 and 7 MHz)

Connectors for RG-178	500
Connectors for RG-316	700
Uncabled receptacles	600

### MECHANICAL RATINGS

**Engagement Force:** 5.6 pounds maximum axial force

**Disengagement Force:** 8 pounds maximum axial force, 1.0 pound min.

**Contact Retention:** 2.3 lbs. min. axial force (captivated contacts)

1 inch-ounce min. torque (uncabled receptacles)

Cable Retention:	Axial Force* (pounds)	Torque (in-oz)
Connectors for RG-178	10	N/A
Connectors for RG-316	20	N/A
Connectors for RG-316DS	25	N/A

\* or cable breaking strength whichever is less.

**ENVIRONMENTAL RATINGS** (Meets or exceed the applicable paragraph of MIL-C-39012)

**Durability:** 500 cycles minimum

**Temperature Range:** - 65°C to + 165°C

**Thermal Shock:** MIL-STD-202, Method 107, Condition F

**Corrosion:** MIL-STD-202, Method 101, Condition B

**Shock:** MIL-STD-202, Method 213, Condition B

**Vibration:** MIL-STD-202, Method 204, Condition B

**Moisture Resistance:** MIL-STD-202, Method 106

### MATERIAL SPECIFICATIONS

**Bodies:** Brass per QQ-B-626 or zinc per ASTM B86-71, gold plated\*\* per MIL-G-45204 .00001" min or nickel plated per QQ-N-290

**Contacts:** Male - brass per QQ-B-626, gold plated per MIL-G-45204 .00003" min.

Female - beryllium copper per QQ-C-530, gold plated per MIL-G-45204 .00003" min.

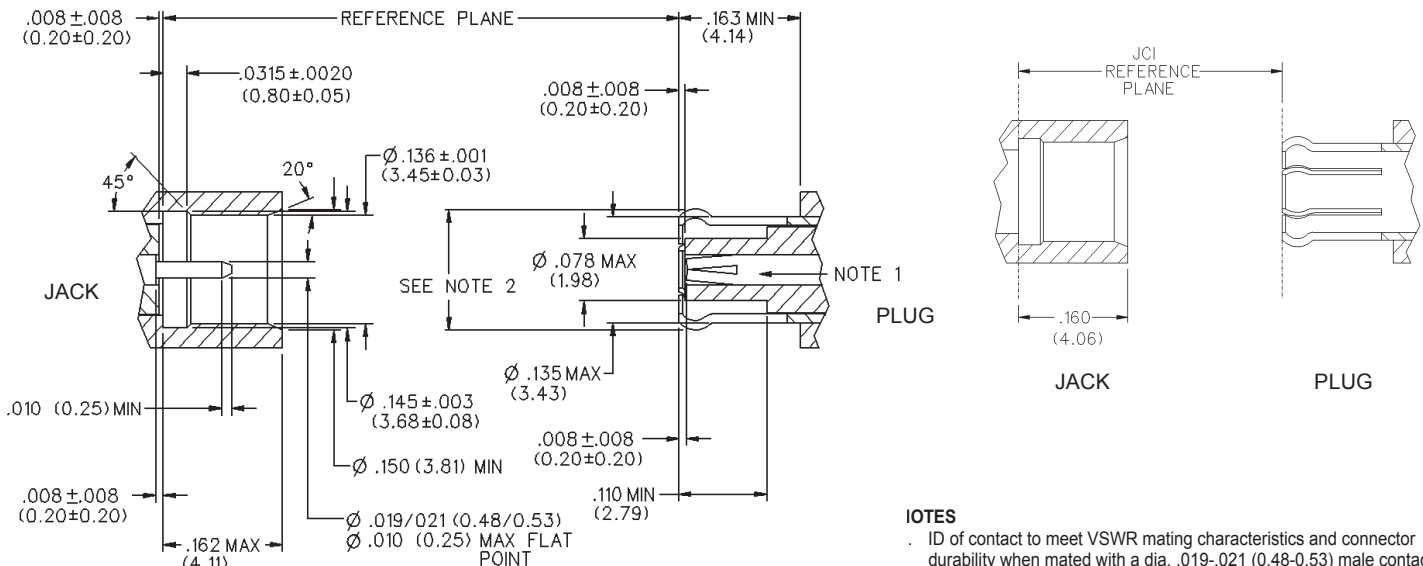
**Insulators:** PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457

**Expansion Caps:** Brass per QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

**Crimp Sleeves:** Copper per WW-T-799, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

**Mounting Hardware:** Brass (nuts) per QQ-B-626 or phosphor bronze (lockwashers) QQ-B-750, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

### MATING ENGAGEMENT FOR MCX REVERSE POLARITY SERIES PER FCC RULE 15 NON-STANDARD INTERFACE



† Avoid user injury due to misapplication.

See safety advisory definitions inside front cover.

\*\* All gold plated parts include a .00005" min. nickel underplate barrier layer.

### NOTES

- ID of contact to meet VSWR mating characteristics and connector durability when mated with a dia. .019-.021 (0.48-0.53) male contact.
- Must meet the force to engage and disengage when mated with mating part.