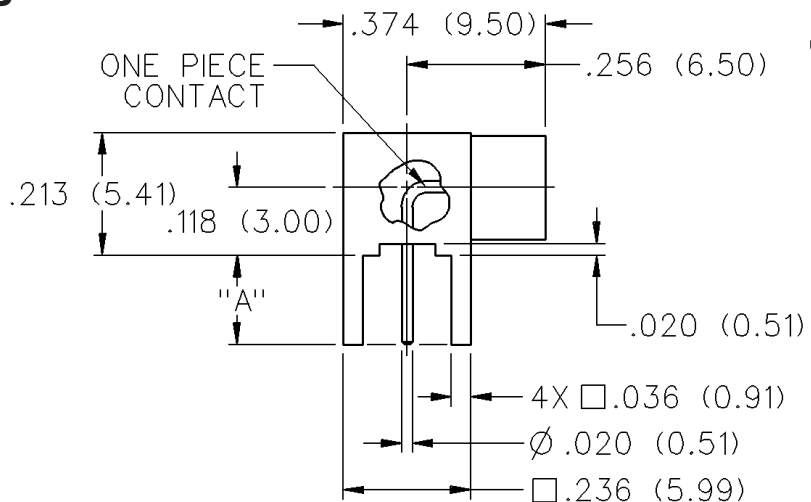


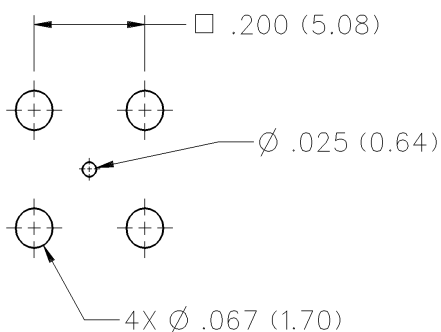
# MCX 75 Ohm Right Angle Jack Receptacle



| "A"         | GOLD PLATED  |
|-------------|--------------|
| .110 (2.70) | 133-8701-301 |



Mounting hole layout



# MCX - 75 Ohm Connectors

## Specifications

**JOHNSON**  
Components™

INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

### ELECTRICAL RATINGS

**Impedance:** 75 Ohms

**Frequency Range:** 0-6 GHz

**VSWR:** (f = GHz)

|                                    | Straight Cabled<br>Connectors | Right Angle<br>Cabled Connectors |
|------------------------------------|-------------------------------|----------------------------------|
| RG-179 cable .....                 | 1.13 + .04f                   | 1.07 + .04f                      |
| In-series adapters .....           | 1.07 + .03f                   |                                  |
| Between series adapters, loads ... | 1.05 + .01f                   |                                  |
| Matching pad .....                 | 1.05 + .05f                   |                                  |
| Uncabled receptacles .....         | N/A                           |                                  |

**Working Voltage:** (Vrms maximum)†

| Connectors for Cable Type            | Sea Level | 70K Feet |
|--------------------------------------|-----------|----------|
| RG-179 .....                         | 335       | 85       |
| Uncabled receptacles, adapters ..... | 335       | 85       |
| Loads, matching pad .....            | N/A       |          |

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

|                                      |      |
|--------------------------------------|------|
| Connectors for RG-179 .....          | 1000 |
| Uncabled receptacles, adapters ..... | 1000 |
| Loads, matching pad .....            | N/A  |

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

|                                      |     |
|--------------------------------------|-----|
| Connectors for RG-179 .....          | 250 |
| Uncabled receptacles, adapters ..... | 250 |
| Loads, matching pad .....            | N/A |

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

|                                                    |        |
|----------------------------------------------------|--------|
| Straight cable connectors .....                    | 0.1 dB |
| Right angle cable connectors .....                 | 0.2 dB |
| Uncabled receptacles, adapters, matching pad ..... | N/A    |

**Insulation Resistance:** 10,000 megohms minimum

**Contact Resistance:** (milliohms maximum)

|                                                                            | Initial | After<br>Environmental |
|----------------------------------------------------------------------------|---------|------------------------|
| Center contact (straight cabled connectors,<br>uncabled receptacles) ..... | 5.0     | 8.0                    |
| Center contact (right angle cabled connectors) ....                        | 5.0     | 15.0                   |
| Center contact (loads, matching pads) .....                                | N/A     |                        |
| Outer contact .....                                                        | 1.0     | 1.5                    |
| Braid to body (gold plated connectors) .....                               | 1.0     | N/A                    |

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

|                                                            |                |
|------------------------------------------------------------|----------------|
| Cable connectors .....                                     | -55 dB typical |
| Uncabled receptacles, adapters, loads, matching pads ..... | N/A            |

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

|                                      |     |
|--------------------------------------|-----|
| Connectors for RG-179 .....          | 700 |
| Uncabled receptacles, adapters ..... | 600 |
| Loads, matching pad .....            | N/A |

**Power Rating:** (Loads and matching pad only) 1.0 watt at +25°C derated linearly to 0.5 watt at +125°C

### MECHANICAL RATINGS

**Engagement Design:** Compatible with CECC 22220, Series MCX 50 Ohm

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

**Disengagement Force:** 8 pounds maximum axial force, 1 pound min.

**Contact Retention:** 2.3 pounds min. axial force (captivated contacts)  
1 inch-ounce min. torque (uncabled receptacles)

| Cable Retention:              | Axial Force*<br>(pounds) | Torque<br>(in-oz) |
|-------------------------------|--------------------------|-------------------|
| Connectors for RG-179 .....   | 20                       | N/A               |
| Connectors for RG179 DS ..... | 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:** All connectors: - 65°C to + 165°C

Loads and matching pads: - 65°C to + 125°C

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

**Temperature Coefficient:** Loads and matching pad: +/- 300ppm/°C

**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, gold plated\*\* per MIL-G-45204 .00001" min. Interface spring - beryllium copper per QQ-C-530, gold plated per MIL-G-45204 .00003" min.

**Contacts:** Male - brass per QQ-B-626 or beryllium copper per QQ-C-530, 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.

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

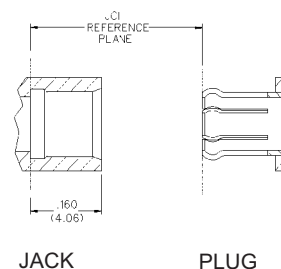
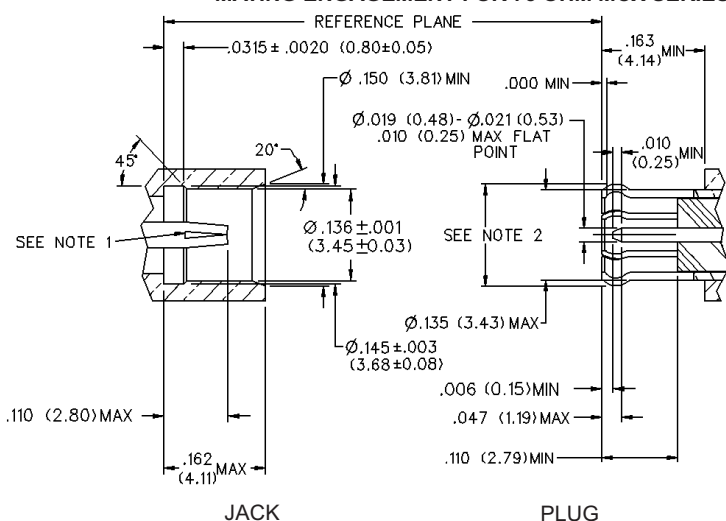
**Mounting Hardware:** Brass (nuts) per QQ-B-626 or phosphor bronze (lockwashers) QQ-B-750, gold plated per MIL-G-45204 .00001" min.

†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.

### MATING ENGAGEMENT FOR 75 OHM MCX SERIES (INTERMATEABLE WITH CECC 22220 50 OHM MCX)



### 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.
- Interface shall intermate with MCX 50 Ohm interface per CECC 22220.