MCX 50 Ohm
2-Hole Flange Mount Jack Receptacle - Extended Dielectric

<table>
<thead>
<tr>
<th>&quot;A&quot;</th>
<th>&quot;B&quot;</th>
<th>GOLD PLATED</th>
<th>NICKEL PLATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>.170 (4.32)</td>
<td>.092 (2.34)</td>
<td>133-3701-611</td>
<td>133-3701-616</td>
</tr>
</tbody>
</table>
# MCX - 50 Ohm Connectors

## Specifications

### Electrical Ratings
- **Impedance:** 50 Ohms
- **Frequency Range:** Connectors ........................................... 0-6 GHz
  - Dummy loads ................................................................. 0-1 GHz
- **VSWR:** (f = GHz) Straight Cabled Connectors Cabled Connectors
  - RG-178 cable ........................................ 1.17 + .04f 1.07 + .06f
  - RG-316 and .086 semi-rigid cable ................... 1.13 + .04f 1.07 + .04f
- **Adapters** ..................................................... 1.13 + .04f
- **Uncabled receptacles, Dummy loads** ................. N/A
- **Working Voltage:** (Vrms maximum)†
  - Connectors for Cable Type Sea Level 70K Feet
    - RG-178 ........................................... 250 65
    - RG-316, .086 semi-rigid un-cabled, un-cabled receptacles, adapters .......... 335 85
    - Dummy loads ................................................ N/A
- **Corona Level:** (Volts minimum at 70,000 feet)†
  - Connectors for RG-178 ......................................... 190
  - Connectors for RG-316, .086 semi-rigid, un-cabled receptacles, adapters .......... 250
    - Dummy loads ................................................ N/A
- **Dielectric Withstanding Voltage:** (VRMS minimum at sea level)†
  - Connectors for RG-178 ......................................... 750
  - Connectors for RG-316, .086 semi-rigid, un-cabled receptacles, adapters .......... 1000
  - Dummy loads ................................................ N/A
- **Insertion Loss:** (dB maximum, tested at 1 GHz)
  - Straight cable connectors and adapters ............ 0.1 dB
  - Right angle cable connectors .............................. 0.2 dB
  - Uncabled receptacles, dummy loads .................. N/A
- **Insulation Resistance:** 10,000 megohms minimum
- **Contact Resistance:** (milliohms maximum) Initial Environmental
  - Center contact (straight cabled connectors, un-cabled receptacles and adapters) ........ 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 and adapters, dummy loads .......... N/A

† Avoid user injury due to misapplication. See safety advisory definitions on page 2.

**Notes:**
- * All gold plated parts include a .00005" min. nickel underplate barrier layer.

### Mechanical Ratings
- **Power Rating (Dummy Load):** 0.5 watt @ +25°C, derated to 0.25 watt @ +125°C

### Environmental Ratings
- **Temperature Range:** Connectors ........................................... -65°C to +125°C
  - Dummy loads ................................................ N/A
- **Thermal Shock:** MIL-STD-202, Method 107, Condition F (N/A dummy loads)
- **Corrosion:** MIL-STD-202, Method 101, Condition B (N/A dummy loads)
- **Shock:** MIL-STD-202, Method 213, Condition B (N/A dummy loads)
- **Vibration:** MIL-STD-202, Method 204, Condition B (N/A dummy loads)
- ** Moisture Resistance:** MIL-STD-202, Method 106 (N/A dummy loads)

### 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 or bright tin plated
- **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

### Mating Engagement for MCX Series Compatible with CECC 22220

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

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**Image:** Diagram of MCX-50 Ohm Connectors with mating engagement dimensions.