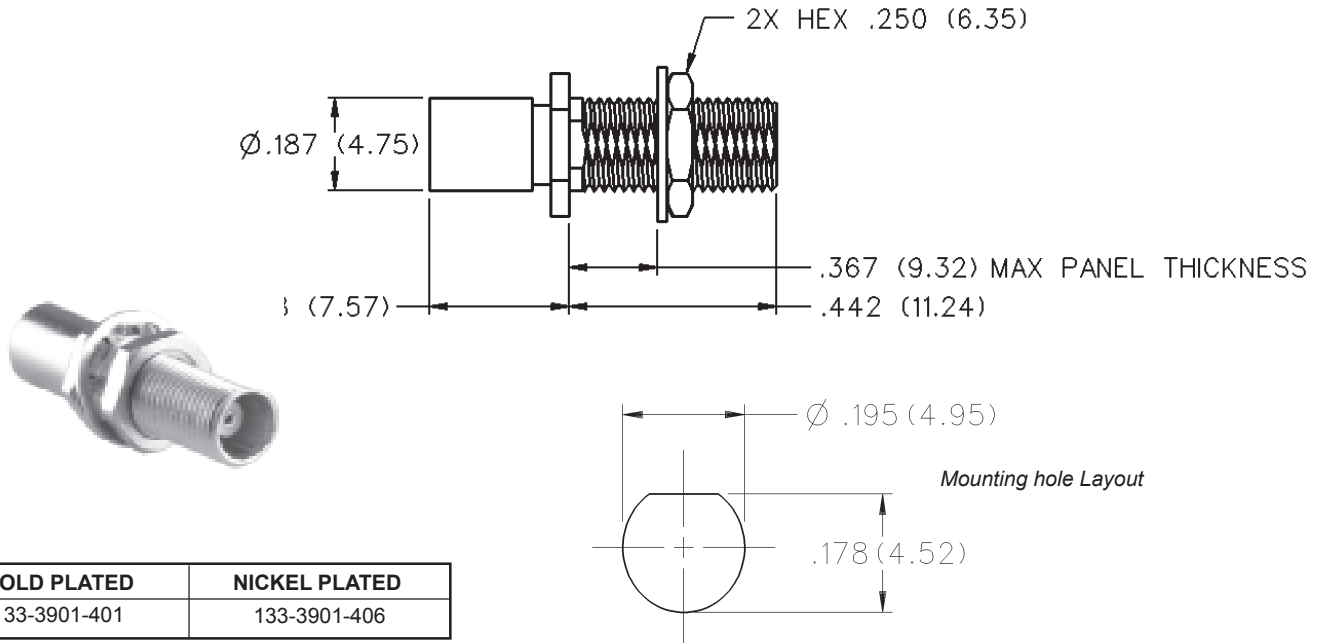


MCX 50 Ohm Jack to Bulkhead Jack Adapter



INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



| GOLD PLATED | NICKEL PLATED |
|--------------|---------------|
| 133-3901-401 | 133-3901-406 |

MCX - 50 Ohm Connectors

Specifications



INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

ELECTRICAL RATINGS

Impedance: 50 Ohms

Frequency Range: Connectors 0-6 GHz
Dummy loads 0-1 GHz

VSWR: (f = GHz) Straight Cabled Right Angle
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 uncabled uncabled receptacles, adapters | 335 | 85 |
| Dummy loads | N/A | N/A |

Dielectric Withstanding Voltage: (VRMS minimum at sea level)

| | |
|---|------|
| Connectors for RG-178 | 750 |
| Connectors for RG-316, .086 semi-rigid, uncabled receptacles, adapters | 1000 |
| Dummy loads | N/A |

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

| | |
|--|-----|
| Connectors for RG-178 | 190 |
| Connectors for RG-316, .086 semi-rigid uncabled receptacles, adapters | 250 |
| 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)

| | After | |
|---|---------|---------------|
| | Initial | Environmental |
| Center contact (straight cabled connectors, uncabled 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.
** All gold plated parts include a .00005" min. nickel underplate barrier layer.

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

| | |
|-----------------------------------|-----|
| Connectors for RG178 | 500 |
| Connectors for RG316 and adapters | 700 |
| .086 semi-rigid | 670 |
| Uncabled receptacles | 600 |
| Dummy loads | N/A |

Power Rating (Dummy Load): 0.5 watt @ +25°C, derated to 0.25 watt @ +125°C

MECHANICAL RATINGS

Engagement Design: Compatible with CECC 22220, Series MCX

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* (pounds) | Torque (in-oz) |
|------------------|--------------------------|-------------------|
|------------------|--------------------------|-------------------|

| | | |
|--------------------------------|----|-----|
| Connectors for RG178 | 10 | N/A |
| Connectors for RG316 | 20 | N/A |
| Connectors for RG316DS | 25 | N/A |
| Connectors for .086 semi-rigid | 30 | 16 |

* 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: Connectors - 65°C to + 165°C
Dummy loads - 65°C to + 125°C

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.

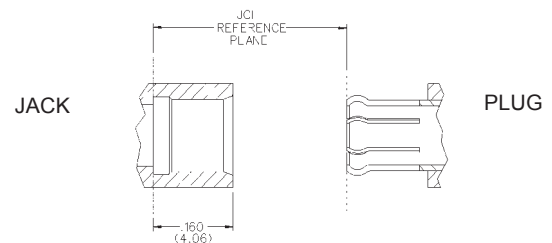
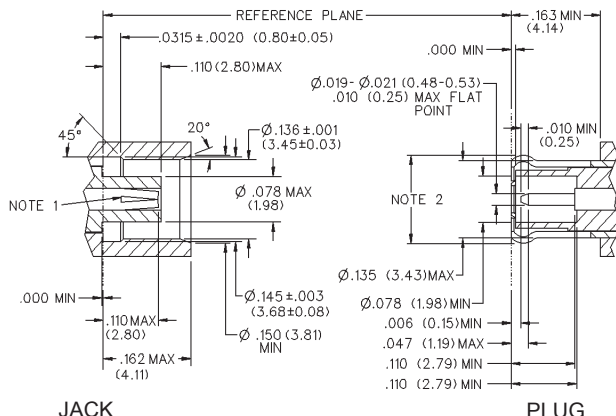
Insulators: PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457

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

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 SERIES COMPATIBLE WITH CECC 22220



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.

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