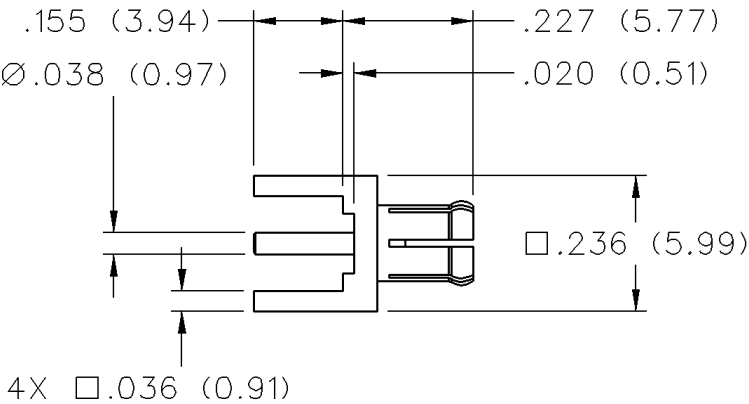


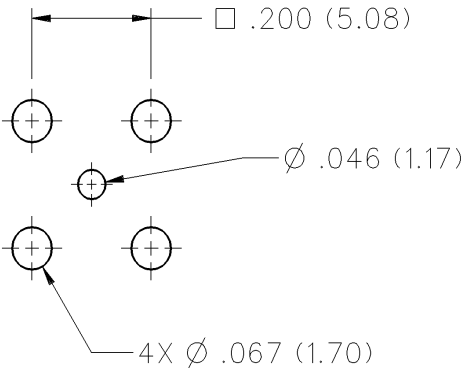
MCX 50 Ohm Straight Plug Receptacle - Low Profile



GOLD PLATED	NICKEL PLATED
133-3801-211	133-3801-216



Mounting hole layout



MCX - 50 Ohm Connectors

Specifications

JOHNSON
Components™

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
Connectors Right Angle
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)

	Initial	After Environmental
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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

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)
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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

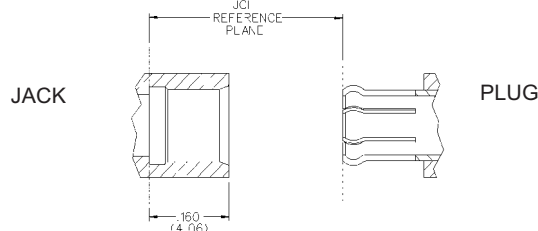
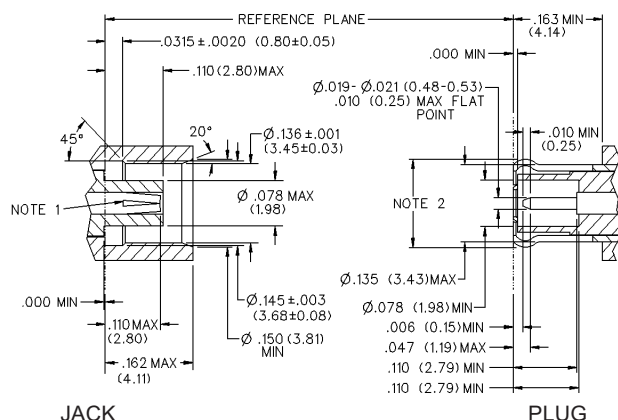
Crimp Sleeves: Copper per WW-T-799, gold plated per MIL-G-45204
.00001" min. or nickel plated per QQ-N-290

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

†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.

MATING ENGAGEMENT FOR MCX SERIES COMPATIBLE WITH CECC 22220



NOTES

1. ID of contact to meet VSWR mating characteristics and connector durability when mated with a dia. 0.019-0.021 (0.48-0.53) male contact.
2. Must meet the force to engage and disengage when mated with mating part.