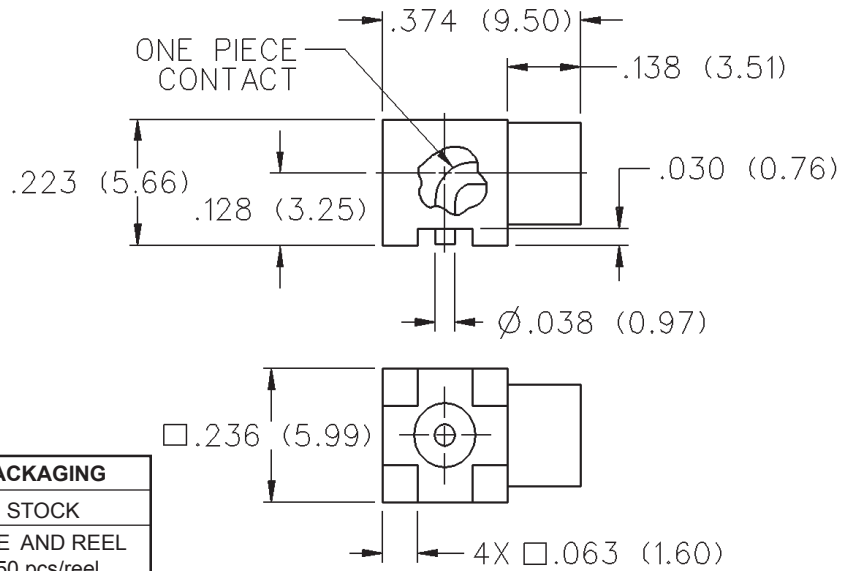


# MCX 50 Ohm Right Angle Jack Receptacle - Surface Mount

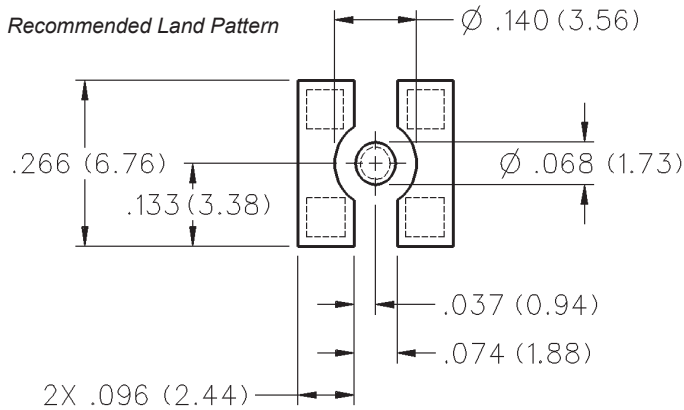


INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



GOLD PLATED	TIN PLATED	PACKAGING
133-3711-301	133-3711-307	STOCK
133-3711-302	133-3711-308	TAPE AND REEL 750 pcs/reel

Tape and Reel .472 (12.0) component pitch X .945 (24.0) wide.



# 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

<b>VSWR:</b> (f = GHz)	Straight Cabled	Right Angle
	<u>Connectors</u>	<u>Cabled Connectors</u>

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	
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Uncabled receptacles, Dummy loads	N/A	
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**Working Voltage:** ( $V_{rms}$  maximum)†

<u>Connectors for Cable Type</u>	<u>Sea Level</u>	<u>70K Feet</u>
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RG-178	250	65
RG-316, .086 semi-rigid uncabled		
uncabled receptacles, adapters	335	85
Dummy loads	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

**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

**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

**RF High Potential Withstanding Voltage:** ( $V_{rms}$  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

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

**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

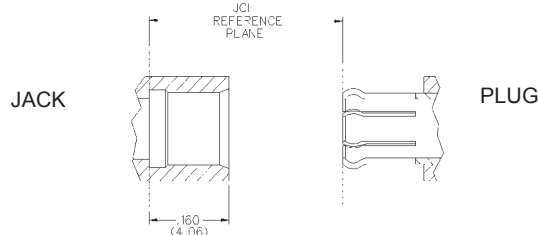
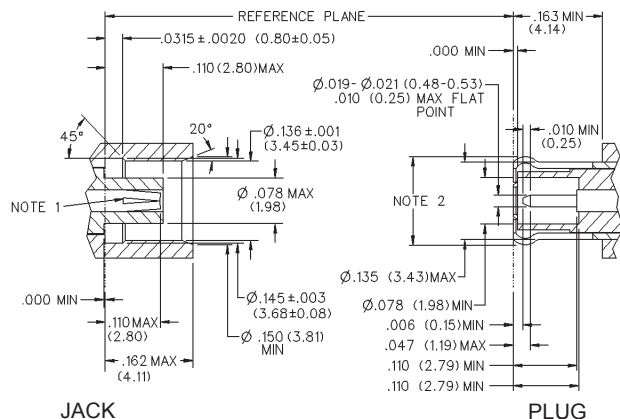
.00001" min. or nickel plated per QQ-N-290

**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

### 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. .019-.021 (0.48-0.53) male contact.
2. Must meet the force to engage and disengage when mated with mating part.

### Cinch Connectivity Solutions

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.

# Mouser Electronics

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[Cinch Connectivity Solutions:](#)

[133-3711-302](#)