

MMCX - 50 Ohm Connectors

Specifications

INCHES (MILLIMETERS) • CUSTOMER DRAWINGS AVAILABLE ON REQUEST



ELECTRICAL RATINGS

Impedance: 50 ohms

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

VSWR: (f = GHz)	Straight	Right Angle
	Cabled Connectors	Cabled Connectors
.047 dia flexible	1.20	1.14 + .07f
RG-178, RG-316, RG-316 DS	1.20	1.25
.086 Semi-Rigid	1.15	1.15
Uncabled receptacles, dummy loads	N/A	

Working Voltage:

Connectors 170 VRMS at sea level†
Dummy loads N/A

Dielectric Withstanding Voltage:

Connectors 500 VRMS at sea level†
Dummy loads N/A

Insulation Resistance: 1000 megohms min

Contact Resistance: (milliohms maximum)

	Initial	After Environmental
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Center contact (straight cabled connectors and uncabled receptacles)	5.0	8.0
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Center contact (right angle cabled connectors)	5.0	15.0
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Outer contact (all connectors)	1.0	1.5
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Braid to body	1.5	N/A
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Corona Level: Connectors 190 volts min at 70,000 feet†
Dummy loads N/A

Insertion Loss: (dB max tested at 1 GHz)

Straight cabled connectors 0.1

Right angle cabled connectors 0.2

Uncabled receptacles, dummy loads N/A

RF Leakage: (dB minimum, tested at 2.5 GHz)

Flexible cable connectors -60 dB

.086 Semi-Rigid -70 dB

Dummy loads N/A

RF High Potential Withstanding Voltage:

(400 VRMS at 4 and 7 MHz)†

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

†Avoid user injury due to misapplication.

See safety advisory definitions inside front cover.

MECHANICAL RATINGS

Engagement Design: Series MMCX

Engagement/Disengagement Force:

8 lbs. max axial engagement

1.4 lbs. min axial disengagement

Contact Retention: 2.0 lbs. minimum axial force

Cable Retention:

	Axial Force* (lbs.)	Torque (in-oz)
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Connectors for .047 flexible	3.5	N/A
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Connectors for RG-178	7.0	N/A
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Connectors for RG-316	20.0	N/A
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Connectors for RG-316 DS	25.0	N/A
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Connectors for .086 Semi-Rigid	30.0	16
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*Or cable breaking strength whichever is less.

Durability: 500 cycles minimum

ENVIRONMENTAL RATINGS

(Meets or exceeds the applicable paragraph of MIL-C-39012)

Operating Temperature: Connectors -65°C to +165°C

Dummy loads -65°C to +125°C

Thermal Shock: Connectors: MIL-STD-202, Method 107,

Condition C, except -55°C to +155°C (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 D (N/A dummy loads)

Moisture Resistance: MIL-STD-202, Method 106 (N/A dummy loads)

MATERIAL SPECIFICATIONS

Bodies: Brass per QQ-B-626, gold plated* per MIL-G-45204 .00001" min.

Contacts: Beryllium copper per QQ-C-530, gold plated* per MIL-G-45204 .00003" min.

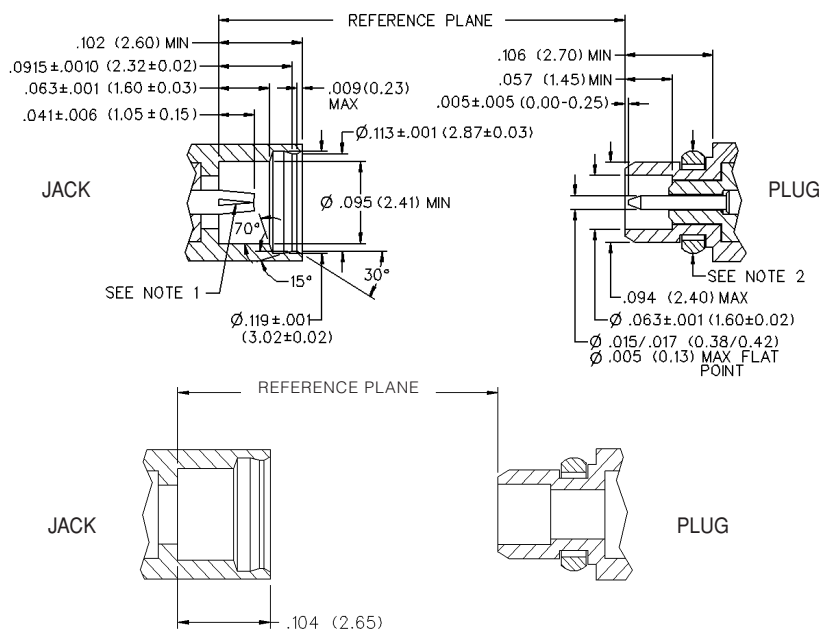
Interface Spring: Beryllium copper per QQ-C-530, gold plated* per MIL-G-45204 .00003" min.

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

Crimp Sleeves: Copper per WW-T-799 or brass per QQ-B-626, gold plated per MIL-G-45204 .00001" min.

Mounting Hardware: Brass per QQ-B-626 or QQ-B-613, gold plated per MIL-G-45204 .00001" min.

*All gold plated parts include a .00005" min nickel barrier layer.



Mating Engagement for MMCX Series

1. ID of contact to meet VSWR mating characteristics and connector durability when mated with a dia .016 +/- .001 male contact.
2. Must meet the force to engage and disengage when mated with mating part.

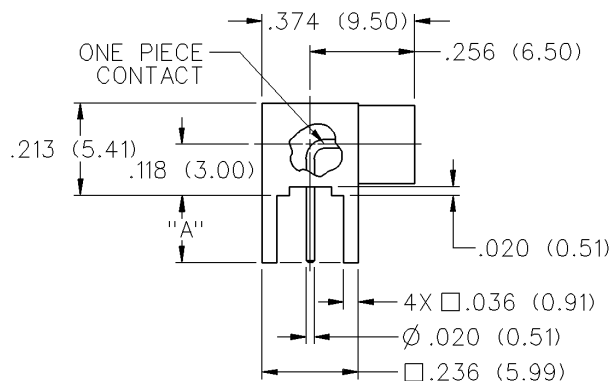
MCX - 75 Ohm Connectors

PC Mount

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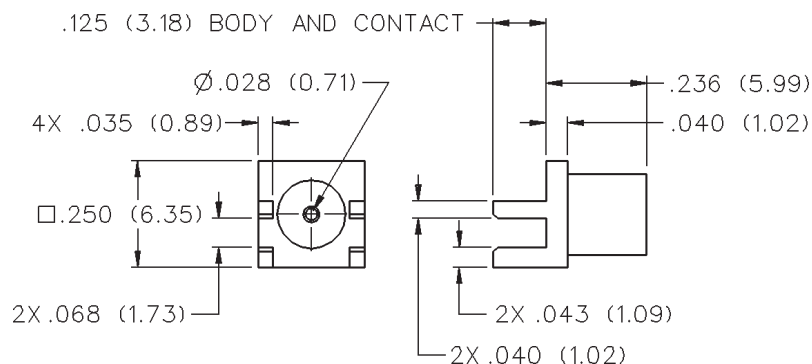
Right Angle Jack Receptacle



GOLD PLATED	"A"
133-8701-301	.155 (3.80)
133-8701-311	.110 (2.70)

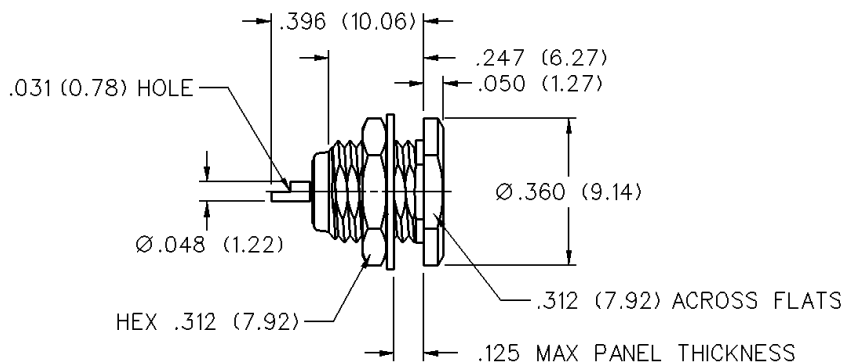
Mounting hole layout figure 3 page 201.

End Launch Jack Receptacle



GOLD PLATED
133-8701-801

Bulkhead Jack Receptacle



GOLD PLATED
133-8701-401

Mounting hole layout figure 1 page 201.