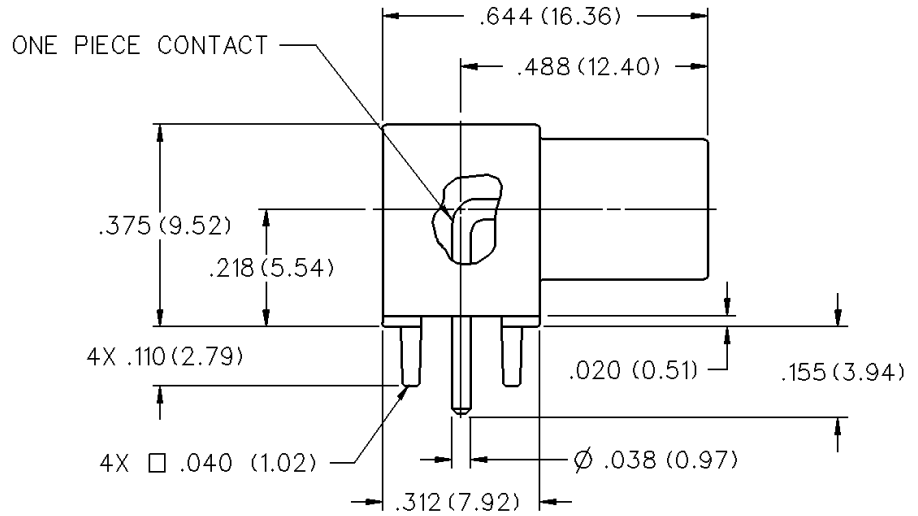


50 Ohm SMB PC Mount Right Angle Plug Receptacle - Die Cast

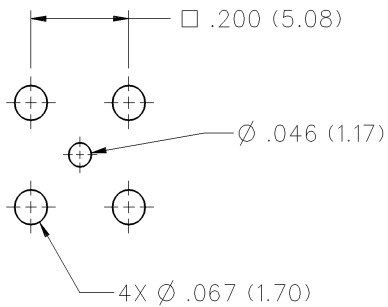


INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



| GOLD PLATED | NICKEL PLATED |
|--------------|---------------|
| 131-1801-371 | 131-1801-376 |

Mounting hole layout



SMB - 50 Ohm Connectors



Specifications

INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

ELECTRICAL RATINGS

Impedance: 50 ohms

Frequency Range: Connectors 0-4 GHz
 Dummy loads 0-1 GHz

VSWR: (f = GHz)

| | Straight Cabled | Right Angle Cabled |
|--|-----------------|--------------------|
| RG-178 cable | 1.30 + .04f | 1.45 + .06f |
| RG-316, RG-58, and .086 semi-rigid cable | 1.25 + .04f | 1.35 + .04f |
| Adapters | 1.20 + .04f | |

Uncabled receptacles, dummy loads N/A

Working Voltage: (Vrms maximum)[†]

| Connectors for Cable Type | Sea Level | 70K Feet |
|---|-----------|----------|
| RG-178 | 250 | 60 |
| RG-316, RG-58, .086 semi-rigid 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, RG-58, .086 semi-rigid, uncabled receptacles, adapters | 1000 |
| Dummy loads | N/A |

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

| | |
|---|-----|
| Connectors for RG-178 | 185 |
| Connectors for RG-316, RG-58, .086 semi-rigid | 250 |
| Uncabled receptacles, adapters, dummy loads | N/A |

Insertion Loss: (dB maximum, tested at 1.5 GHz)

| | |
|--|---------|
| Straight cable connectors | 0.30 dB |
| Right angle cable connectors | 0.60 dB |
| Uncabled receptacles, adapters and dummy loads | N/A |

Insulation Resistance: 1000 megohms minimum

Contact Resistance: (milliohms maximum)

| | Initial | After Environmental |
|--|---------|---------------------|
| Center contact (straight cabled connectors and uncabled receptacles) | 6.0 | 8.0 |
| Center contact (right angle cabled connectors and adapters) | 12.0 | 16.0 |
| Outer contact (gold plated connectors) | 1.0 | 1.5 |
| Outer contact (nickel plated connectors) | 2.5 | 3.5 |
| Braid to body (gold plated connectors) | 1.0 | N/A |
| Braid to body (nickel plated connectors) | 2.5 | N/A |

RF Leakage: (dB minimum tested at 2.5 GHz)

| | |
|--|--------|
| Cable connectors | -55 dB |
| Uncabled receptacles, adapters and dummy loads | N/A |

RF High Potential Withstanding Voltage:

| | |
|--|-----|
| (Vrms minimum, tested at 4 and 7 MHz) [†] | |
| Connectors for RG-178 | 500 |
| Connectors for RG-316, RG-58 | 700 |
| Uncabled receptacles and adapters | 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: MIL-C-39012, Series SMB

Engagement/Disengagement Force: 2 pounds min to 14 pounds maximum axial force

Contact Retention: 4 lbs. min axial force (captivated contacts)
 1 inch-ounce min torque (uncabled receptacles)

| Cable Retention: | Axial Force* (pounds) | Torque (in-oz) |
|--------------------------------|-----------------------|----------------|
| Connectors for RG-178 | 10 | N/A |
| Connectors for RG-316 | 20 | N/A |
| Connectors for RG-58 | 40 | 16 |
| Connectors for .086 semi-rigid | 30 | 16 |

* or cable breaking strength whichever is less.

Durability: 500 cycles minimum

ENVIRONMENTAL RATINGS

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

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

Thermal Shock: MIL-STD-202, Method 107, Condition B (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)

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

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 OR Teflon PFA 340

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

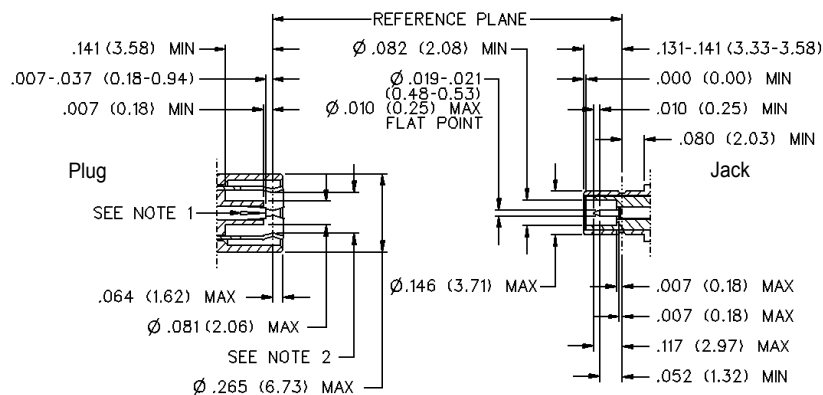
Mounting Hardware: Brass (nuts) per QQ-B-626 or phosphor bronze (lockwashers) QQ-B-750, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

Cover Rings: Phosphor Bronze per 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 inside front cover.

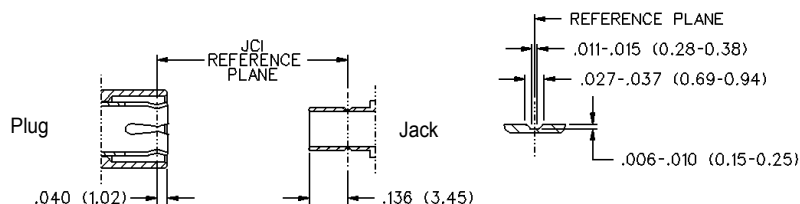
** All gold plated parts include a .00005" min. nickel underplate barrier layer.

MATING ENGAGEMENT FOR SMB SERIES PER MIL-C-39012



Notes

1. ID of contact to meet VSWR mating characteristics and connector durability when mated with a dia .019 /0.53 male contact.
2. Must meet the force to engage and disengage when mated with mating part.



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