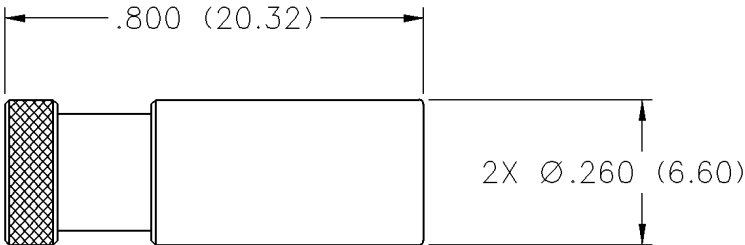
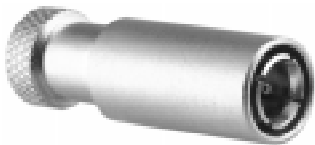


# SMB Matched Plug Open and Short

INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



| TERMINATION | GOLD PLATED  |
|-------------|--------------|
| OPEN        | 131-8801-821 |
| SHORT       | 131-8801-811 |

# Mini-75 Ohm SMB Connectors

## Specifications



INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

### ELECTRICAL RATINGS

**Impedance:** 75 ohms

**Frequency Range:** 0-2 GHz

**VSWR:** f = GHz

RG-179, RG-59, Belden 735A cable:

|                                           |             |
|-------------------------------------------|-------------|
| Straight cabled connectors .....          | 1.25 + .04f |
| Right angle cabled connectors .....       | 1.35 + .04f |
| Adapters .....                            | 1.20 + .04f |
| Type N Adapters .....                     | 1.05 + .01f |
| Matching pad 50 ohm/75 ohm .....          | 1.05 + .1f  |
| Loads .....                               | 1.05 + .01f |
| Uncabled receptacles, opens, shorts ..... | N/A         |

**Working Voltage:** (Vrms maximum)†

| Connectors for Cable Type                                           | Sea Level | 70K Feet |
|---------------------------------------------------------------------|-----------|----------|
| RG-179, RG-59, Belden 735A,<br>uncabled receptacles, adapters ..... | 335       | 85       |
| Open, shorts, loads, matching pad .....                             | N/A       | N/A      |

**Dielectric Withstanding Voltage:** (VRMS minimum at sea level)†

|                                                                                    |      |
|------------------------------------------------------------------------------------|------|
| Connectors for RG-179, RG-59, Belden 735A,<br>uncabled receptacles, adapters ..... | 1000 |
| Open, shorts, loads, matching pad .....                                            | N/A  |

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

|                                                                        |     |
|------------------------------------------------------------------------|-----|
| Connectors for RG-179, RG-59, Belden 735A .....                        | 250 |
| Uncabled receptacles, adapters, open, shorts, loads, matching pad: N/A |     |

**Electrical Length:** Open  $\pm 1.5^\circ$  ( $\pm 5.2^\circ$  relative to short)

Short  $\pm 1.5^\circ$  ( $\pm 5.2^\circ$  relative to open)

Adapters  $\pm 5.2^\circ$  (N/A for Jack-Bulkhead Jack and N Types)

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

|                                                            |              |
|------------------------------------------------------------|--------------|
| Straight cable connectors .....                            | 0.30 dB      |
| Right angle cable connectors .....                         | 0.60 dB      |
| Matching pad .....                                         | 6 dB nominal |
| Uncabled receptacles, adapters, opens, shorts, loads ..... | N/A          |

**Insulation Resistance:** 1000 megohms minimum

| Contact Resistance: (milliohms maximum)                                                          | Initial | After Environmental |
|--------------------------------------------------------------------------------------------------|---------|---------------------|
| Center contact (straight cabled connectors,<br>uncabled receptacles, opens, shorts, loads) ..... | 6.0     | 8.0                 |
| Center contact (right angle cabled<br>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 opens, shorts, loads, matching pad...N/A |        |

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

|                                                 |     |
|-------------------------------------------------|-----|
| Connectors for RG-179, RG-59, Belden 735A ..... | 700 |
| Uncabled receptacles and adapters .....         | 600 |
| Opens, shorts, loads, matching pad .....        | N/A |

**Power Rating:** (Loads and matching pad only) 1.0 watt at +25°C derated linearly to .5 watt at +125°C

### MECHANICAL RATINGS

**Engagement Design:** MIL-C-39012, Series SMB

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

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

**Cable Retention:**

|  | Axial Force*<br>(pounds) | Torque<br>(in-oz) |
|--|--------------------------|-------------------|
|--|--------------------------|-------------------|

Connectors for RG-179, Belden 735A .....

Connectors for RG-59 .....

\* or cable breaking strength whichever is less.

**Durability:** 500 cycles minimum

### ENVIRONMENTAL RATINGS (Meets or exceed the applicable paragraph of MIL-C-39012)

**Temperature Range:** - 65°C to +165°C -- Connectors and adapters

- 65°C to +125°C -- Loads, matching pad

20°C to 26°C -- Opens, shorts

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

(N/A opens, shorts, loads, matching pad)

**Corrosion:** MIL-STD-202, Method 101, Condition B

(N/A opens, shorts, loads, matching pad)

**Shock:** MIL-STD-210, Method 213, Condition B

(N/A opens, shorts, loads, matching pad)

**Vibration:** MIL-STD-202, Method 204, Condition B

(N/A opens, shorts, loads, matching pad)

**Temperature Coefficient:** (Loads only)  $\pm 300$  ppm/°C

### MATERIAL SPECIFICATIONS

**Bodies:** Brass per QQ-B-626, gold plated\*\* per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

N type adapters stainless steel per QQ-S-763, passivated per

MIL-F-14072

**Contacts:** Male & 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

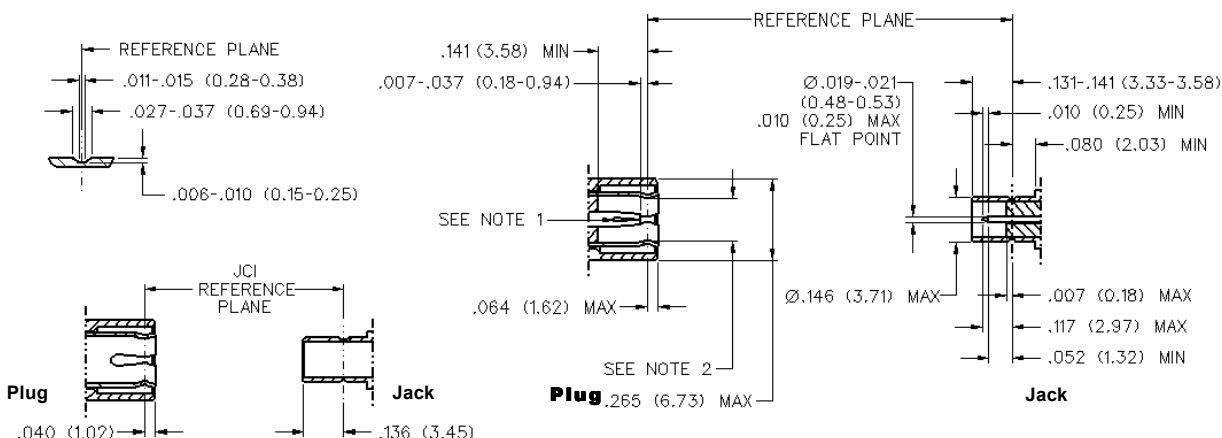
**Crimp Sleeves:** Copper per WW-T-799, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

**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

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

Avoid user injury due to misapplication. See safety advisory definitions inside front cover.

### MATING ENGAGEMENT FOR MINI-75 OHM SMB SERIES (INTERMATEABLE WITH STANDARD 50 OHM SMB)



- 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.

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