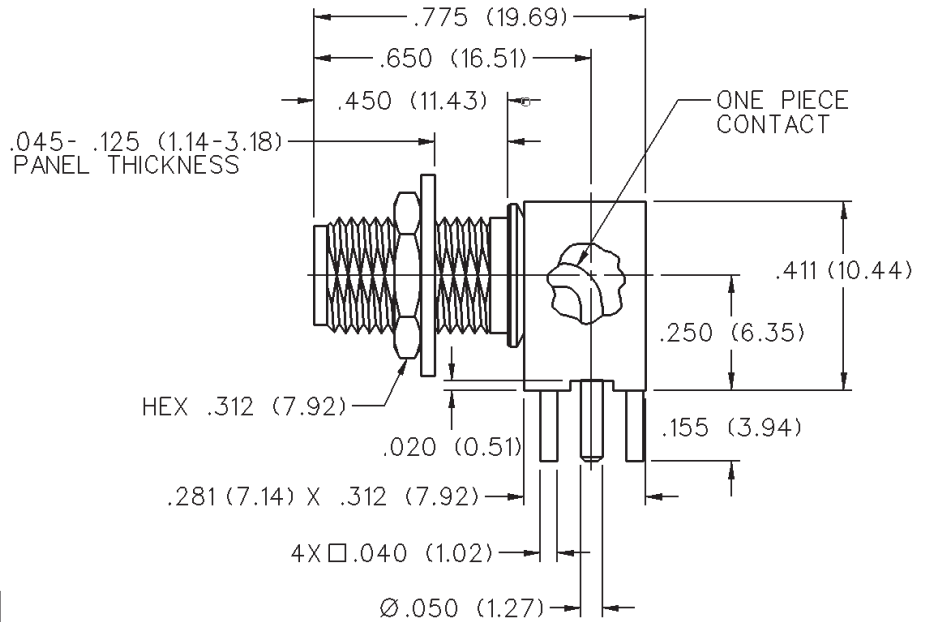
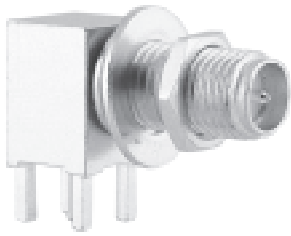


# SMA 50 Ohm Reverse Polarity Right Angle Bulkhead Jack Receptacle

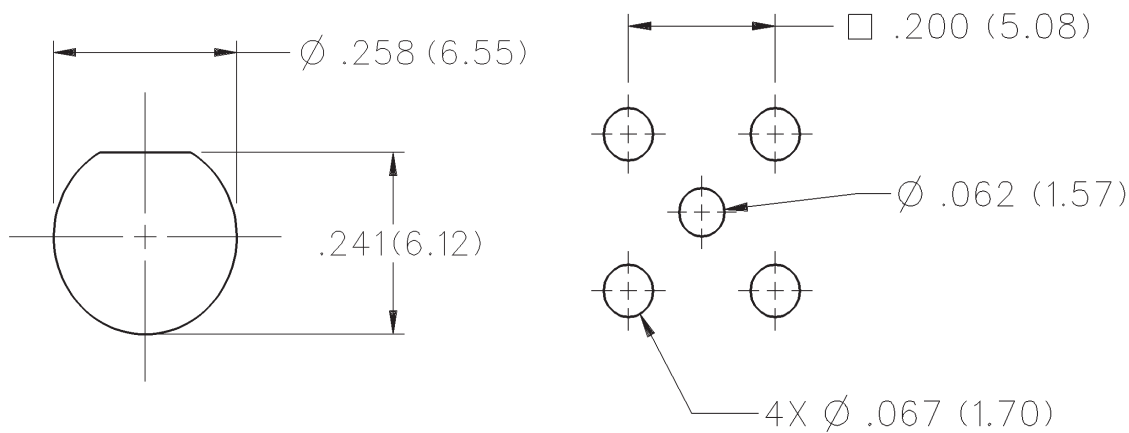


INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST



GOLD PLATED	NICKEL PLATED
142-4701-501	142-4701-506

Mounting hole layouts



# SMA Reverse Polarity - 50 Ohm



## Specifications

INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

### ELECTRICAL RATINGS

**Impedance:** 50 ohms

#### Frequency Range:

Flexible cable connectors ..... 0-12.4 GHz  
Uncabled receptacles ..... 0-18.0 GHz

#### VSWR: (f = GHz)

	Straight Cabled Connectors	Right Angle Cabled Connectors
RG-316, LMR-100 cable .....	1.15 + .02f	1.15 + .03f
RG-58, LMR-195 cable .....	1.17 + .025f	1.17 + .06f
RG-142 cable .....	1.17 + .02f	1.15 + .03f
LMR-200, LMR-240 cable .....	1.10 + .03f	1.10 + .06f

Uncabled receptacles ..... N/A

#### Working Voltage: (Vrms maximum)†

Connectors for Cable Type	Sea Level	70K Feet
RG-316; LMR-100, 195, 200 .....	250	65
RG-58, RG-142, LMR-240, uncabled receptacles ..	335	85

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

Connectors for RG-316; LMR-100, 195, 200 ..... 750  
Connectors for RG-58, RG-142, LMR-240, uncabled receptacles . 1000

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

Connectors for RG-316, LMR-100, 195, 200 ..... 190  
Connectors for RG-58, RG-142, LMR-240, uncabled receptacles ... 250

#### Insertion Loss: (dB maximum)

Straight flexible cable  
connectors .....  $.06 \sqrt{f}$  (GHz), tested at 6 GHz  
Right angle flexible cable  
connectors .....  $0.15 \sqrt{f}$  (GHz), tested at 6 GHz  
Low loss flexible straight  
cable connectors .....  $0.06 \sqrt{f}$  (GHz), tested at 1 GHz  
Low loss flexible right angle  
cable connectors .....  $0.15 \sqrt{f}$  (GHz), tested at 1 GHz  
Uncabled receptacles, field replaceable ..... N/A

#### Insulation Resistance: 5000 megohms minimum

#### Contact Resistance: (milliohms maximum)

	Initial	After Environmental
Center contact (straight cabled connectors and uncabled receptacles) .....	3.0*	4.0*
Center contact (right angle cabled connectors) .....	4.0	6.0
Outer contact (all connectors) .....	2.0	N/A
Braid to body (gold plated connectors) .....	0.5	N/A
Braid to body (nickel plated connectors) .....	5.0	N/A

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

Flexible cable connectors ..... -60 dB  
Uncabled receptacles and adapters ..... N/A

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

Connectors for RG-316; LMR-100, 195, 200 ..... 500  
Connectors for RG-58, RG-142, LMR-240, uncabled receptacles ... 670

### MECHANICAL RATINGS

#### Engagement Design: MIL-C-39012, Series SMA

#### Engagement/Disengagement Force: 2 inch-pounds maximum

#### Mating Torque: 7 to 10 inch-pounds

#### Bulkhead Mounting Nut Torque: 15 inch-pounds

#### Coupling Proof Torque: 15 inch-pounds minimum

#### Coupling Nut Retention: 60 pounds minimum

#### Contact Retention:

6 lbs. minimum axial force (captivated contacts)  
4 inch-ounce minimum torque (uncabled receptacles)

Cable Retention:	Axial Force* (pounds)	Torque (in-oz)
Connectors for RG-316, LMR-100 .....	20	N/A
Connectors for LMR195, 200 .....	30	N/A
Connectors for RG-58, LMR-240 .....	40	N/A
Connectors for RG-142 .....	45	N/A

\*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

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

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

#### Shock: MIL-STD-202, Method 213, Condition I

#### Vibration: MIL-STD-202, Method 204, Condition D

#### Moisture Resistance: MIL-STD-202, Method 106

### MATERIAL SPECIFICATIONS

**Bodies:** Brass per QQ-B-626, 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.

#### Nut Retention Spring: Beryllium copper per QQ-C-533. Unplated

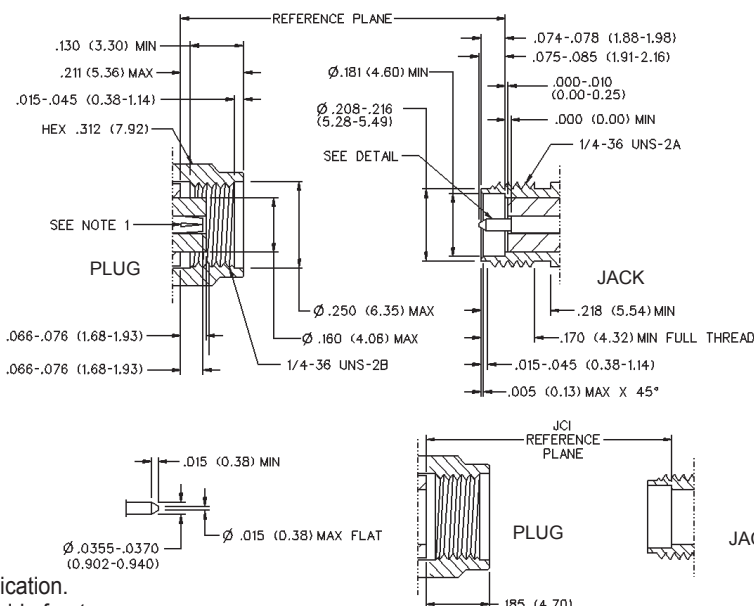
**Insulators:** PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457 or Tefzel per ASTM D 3159

**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 or brass per QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

**Mounting Hardware:** Brass per QQ-B-626 or QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

### MATING ENGAGEMENT FOR SMA REVERSE POLARITY SERIES PER FCC RULE 15 NON-STANDARD INTERFACE



#### NOTES

- ID OF CONTACT TO MEET VSWR, CONTACT RESISTANCE AND INSERTION WITHDRAWAL FORCES WHEN MATED WITH DIA .0355-.0370 MALE PIN.

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

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