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[142-9701-801](#)

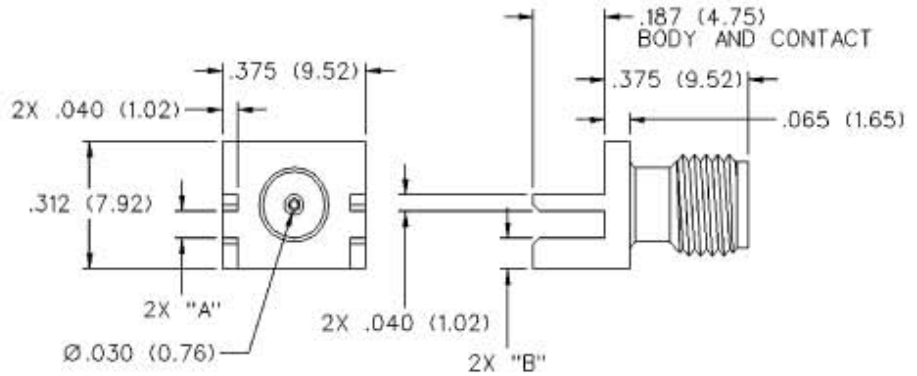
For any questions, you can email us directly:  
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

# SMA Non-Magnetic RF Connectors

PC Mount

INCHES (MILLIMETERS)  
 CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## End Launch Jack Receptacle - Round Contact



VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	.062 (1.57)	142-9701-801	.068 (1.73)	.073 (1.85)

## SPECIFICATIONS

### 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	RA Cabled Connectors
RG-316	1.15 + .02f	1.15 + .03f
RG-58	1.15 + .01f	1.15 + .02f

Uncabled receptacles ..... N/A

### Working Voltage: (Vrms maximum)

Connectors for Cable Type	Sea Level	70K Feet
RG-316	250	65
RG-58, uncabled receptacles	335	85

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

Connectors for RG-316	750
Connectors for RG-58, uncabled receptacles	1000

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

Connectors for RG-316	190
Connectors for RG-58, uncabled receptacles	250

**Insertion Loss:** (dB maximum)

Straight flexible cable connectors	0.06 $\sqrt{f(\text{GHz})}$ , tested at 6 GHz
Right angle flexible cable connectors	0.15 $\sqrt{f(\text{GHz})}$ , tested at 6 GHz
Uncabled receptacles	N/A

**Insulation Resistance:** 5000 megohms minimum

**Contact Resistance:** (milliohms maximum)

	Initial	After Environmental
Center contact (straight cabled connectors, 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	0.5	N/A

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

Flexible cable connectors	-60 dB
Uncabled receptacles	N/A

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

Connectors for RG-316	500
Connectors for RG-58, uncabled receptacles	670

### MECHANICAL RATINGS

**Engagement Design:** MIL-STD-348, Series SMA

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

**Mating Torque:** 7 to 10 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*(lbs)	Torque (in-oz)
Connectors for RG-316	20	N/A
Connectors for RG-58	40	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