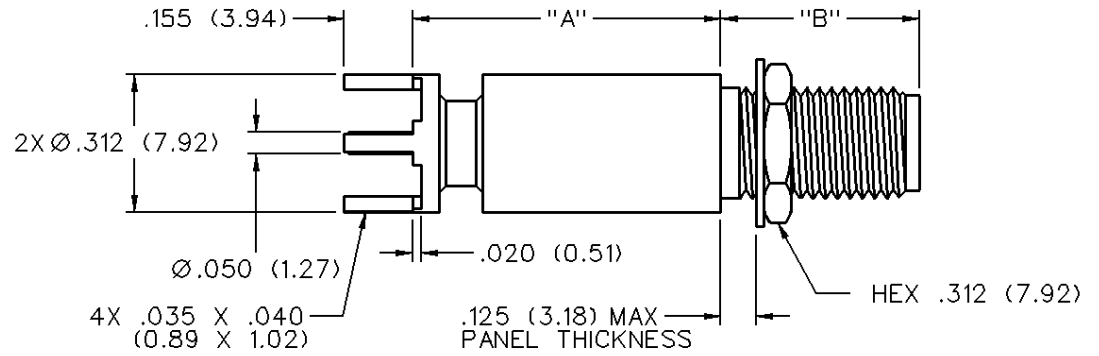
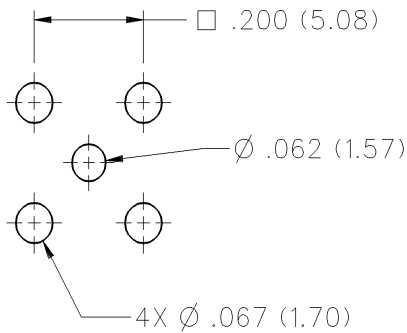


SMA 50 Ohm Straight Bulkhead Jack Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	142-0701-491	142-0701-496	.065 (1.65)	.755 (19.18)



Mounting hole layout

SMA - 50 Ohm Connectors

Specifications



ELECTRICAL RATINGS

Impedance: 50 ohms

Frequency Range:

Dummy loads	0-2 GHz
Flexible cable connectors	0-12.4 GHz
Uncabled receptacles, RA semi-rigid and adapters	0-18.0 GHz
Straight semi-rigid cable connectors and field replaceable connectors	0-26.5 GHz

VSWR: (f = GHz)

	Straight Cabled Connectors	Right Angle Cabled Connectors
RG-178 cable	1.20 + .025f	1.20 + .03f
RG-316, LMR-100 cable	1.15 + .02f	1.15 + .03f
RG-58, LMR-195 cable	1.15 + .01f	1.15 + .02f
RG-142 cable	1.15 + .01f	1.15 + .02f
LMR-200, LMR-240 cable	1.10 + .03f	1.10 + .06f
.086 semi-rigid	1.07 + .008f	1.18 + .015f
.141 semi-rigid (w/contact)	1.05 + .008f	1.15 + .015f
.141 semi-rigid (w/o contact)	1.035 + .005f	

Jack-bulkhead jack adapter and plug-plug adapter

Jack-jack adapter and plug-jack adapter

Uncabled receptacles, dummy loads

Field replaceable (see page 59)

Working Voltage: (Vrms maximum)†

Connectors for Cable Type	Sea Level	70K Feet
RG-178	170	45
RG-316; LMR-100, 195, 200	250	65
RG-58, RG-142, LMR-240, .086 semi-rigid, uncabled receptacles, .141 semi-rigid w/o contact ...	335	85
.141 semi-rigid with contact and adapters	500	125
Dummy loads		N/A

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

Connectors for RG-178

Connectors for RG-316; LMR-100, 195, 200

Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, field replaceable, uncabled receptacles

Connectors for .141 semi-rigid with contact and adapters

Connectors for .141 semi-rigid w/o contact, dummy loads

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

Connectors for RG-178

Connectors for RG-316; LMR-100, 195, 200

Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, uncabled receptacles, .141 semi-rigid w/o contact

Connectors for .141 semi-rigid with contact and adapters

Dummy loads

Insertion Loss: (dB maximum)

Straight flexible cable connectors and adapters	0.06	\sqrt{f} (GHz), tested at 6 GHz
Right angle flexible cable connectors	0.15	\sqrt{f} (GHz), tested at 6 GHz
Straight semi-rigid cable connectors with contact	0.03	\sqrt{f} (GHz), tested at 10 GHz
Right angle semi-rigid cable connectors	0.05	\sqrt{f} (GHz), tested at 10 GHz
Straight semi-rigid cable connectors w/o contact	0.03	\sqrt{f} (GHz), tested at 16 GHz
Straight low loss flexible cable connectors	0.06	\sqrt{f} (GHz), tested at 1 GHz
Right Angle low loss flexible cable connectors	0.15	\sqrt{f} (GHz), tested at 1 GHz
Uncabled receptacles, field replaceable, dummy loads		N/A

Insulation Resistance: 5000 megohms minimum

Contact Resistance: (milliohms maximum) **Initial** **After Environmental**

Center contact (straight cabled connectors and uncabled receptacles)

Center contact (right angle cabled connectors and adapters)

Field replaceable connectors

Outer contact (all connectors)

Braid to body (gold plated connectors)

Braid to body (nickel plated connectors)

*N/A where the cable center conductor is used as a contact

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

Flexible cable connectors, adapters and .141 semi-rigid connectors w/o contact

Field replaceable w/o EMI gasket

.086 semi-rigid connectors and .141 semi-rigid connectors with contact, and field replaceable with EMI Gasket

Two-way adapters

Uncabled receptacles, dummy loads

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

Connectors for RG-178

Connectors for RG-316; LMR-100, 195, 200

Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, .141 semi-rigid cable w/o contact, uncabled receptacles

Connectors for .141 semi-rigid with contact and adapters

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

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*(lbs) **Torque (in-oz)**

Connectors for RG-178

Connectors for RG-316, LMR-100

Connectors for LMR-195, 200

Connectors for RG-58, LMR-240

Connectors for RG-142

Connectors for .086 semi-rigid

Connectors for .141 semi-rigid

*Or cable breaking strength whichever is less.

Durability: 500 cycles minimum

100 cycles minimum for .141 semi-rigid connectors w/o contact

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

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

Moisture Resistance: MIL-STD-202, Method 106

ENVIRONMENTAL RATINGS (Meets or exceeds 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

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

SMA - 50 Ohm Connectors

Specifications

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 or PFA 340 per ASTM

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

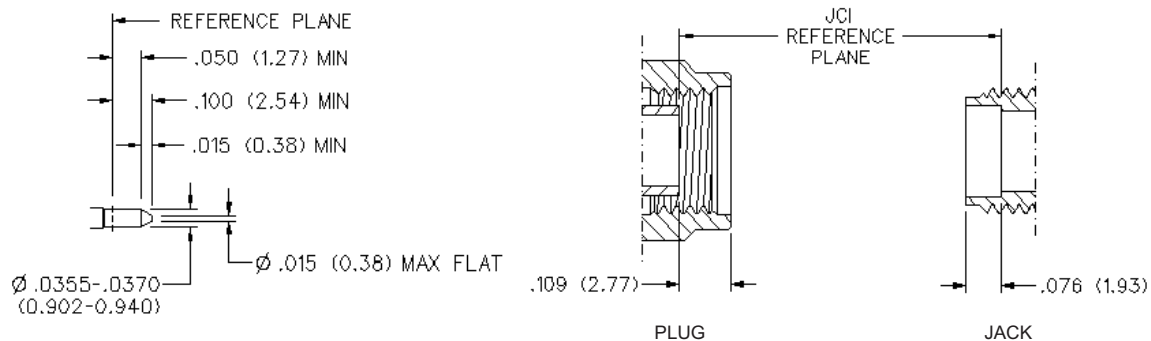
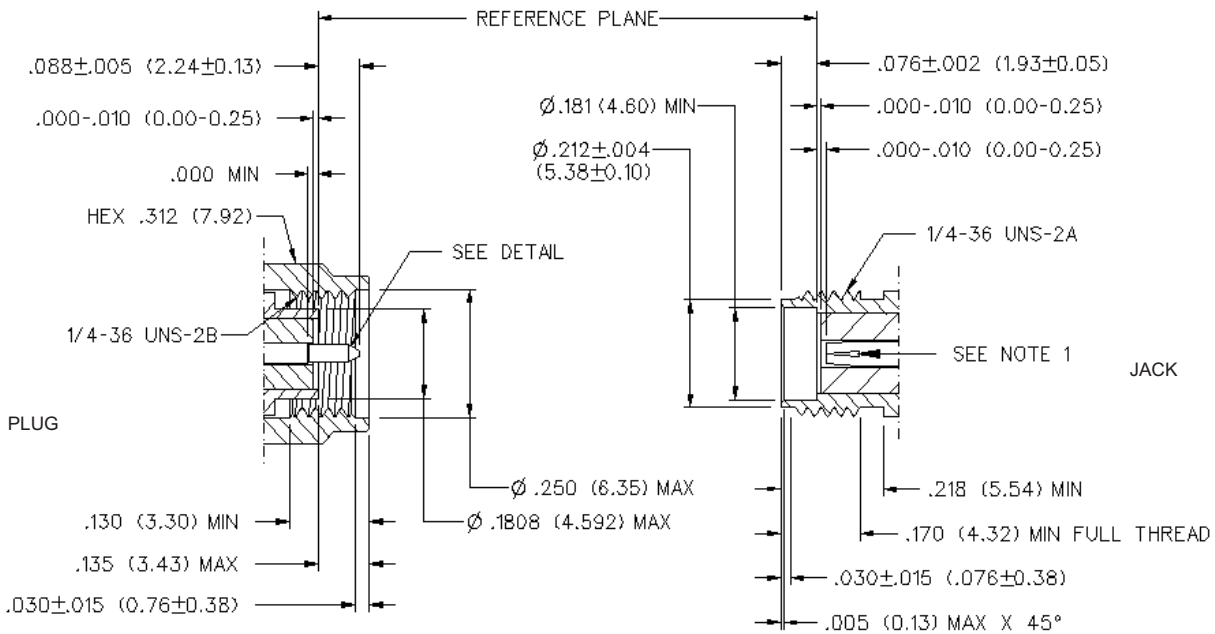
Mounting Hardware: Brass per QQ-B-626 or QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

Seal Rings: Silicone rubber per ZZ-R-765

EMI Gaskets: Conductive silicone rubber per MIL-G-83528, Type M

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

Mating Engagement for SMA Series per MIL-C-39012



NOTES

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