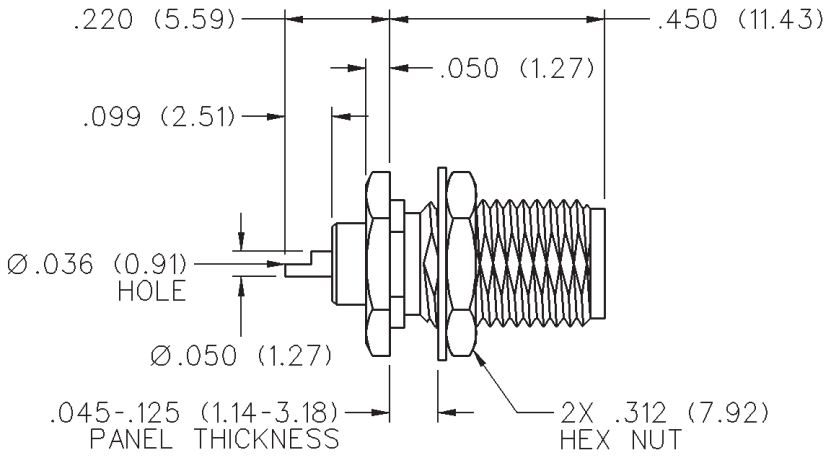
50 Ohm SMA
Rear Mount Bulkhead Jack Receptacle

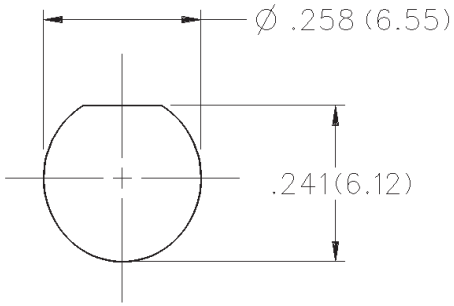
INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST





VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-401	142-0701-406

Mounting hole layout



Cinch Connectivity Solutions
299 Johnson Avenue SW, Waseca, MN 56093 USA • 800.247.8256 • +1 507 833 8822 • cinchconnectivity.com

SMA - 50 Ohm Connectors

Specifications

INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

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	1.05 + .01f	
Jack-jack adapter and plug-jack adapter	1.05 + .005f	
Uncabled receptacles, dummy loads	N/A	
Field replaceable (*see page 59)*	N/A	

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-178 500
- Connectors for RG-316; LMR-100, 195, 200 750
- Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, field replaceable, uncabled receptacles 1000
- Connectors for .141 semi-rigid with contact and adapters 1500
- Connectors for .141 semi-rigid w/o contact, dummy loads ..... N/A

Corona Level: (Volts minimum at 70,000 feet)
- Connectors for RG-178 125
- Connectors for RG-316; LMR-100, 195, 200 190
- Connectors for RG-58, RG-142, LMR-240, 086 semi-rigid, uncabled receptacles, .141 semi-rigid w/o contact 250
- Connectors for .141 semi-rigid with contact and adapters 375

Dummy loads ..... N/A

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)	3.0*	4.0*
Center contact (right angle cabled connectors and adapters)	4.0	6.0
Field replaceable connectors	6.0	8.0
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

*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 ..... -60 dB
- Field replaceable w/o EMI gasket ..... -70 dB
- .086 semi-rigid connectors and .141 semi-rigid connectors with contact, and field replaceable with EMI Gasket ..... -90 dB
- Two-way adapters ..... -90 dB
- Uncabled receptacles, dummy loads ..... N/A

RF High Potential Withstanding Voltage: (Vrms minimum, tested at 4 and 7 MHz)
- Connectors for RG-178 335
- Connectors for RG-316; LMR-100, 195, 200 500
- Connectors for RG-58, RG-142, LMR-240, .086 semi-rigid, .141 semi-rigid cable w/o contact, uncabled receptacles 670
- Connectors for .141 semi-rigid with contact and adapters 1000

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	10	N/A
Connectors for RG-316, LMR-100	20	N/A
Connectors for LMR-195, 200	30	N/A
Connectors for RG-58, LMR-240	40	N/A
Connectors for RG-142	45	N/A
Connectors for .086 semi-rigid	30	16
Connectors for .141 semi-rigid	60	55

*Or cable breaking strength whichever is less.

Durability: 500 cycles minimum
100 cycles minimum for .141 semi-rigid connectors w/o contact

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

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

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SMA - 50 Ohm Connectors

Specifications

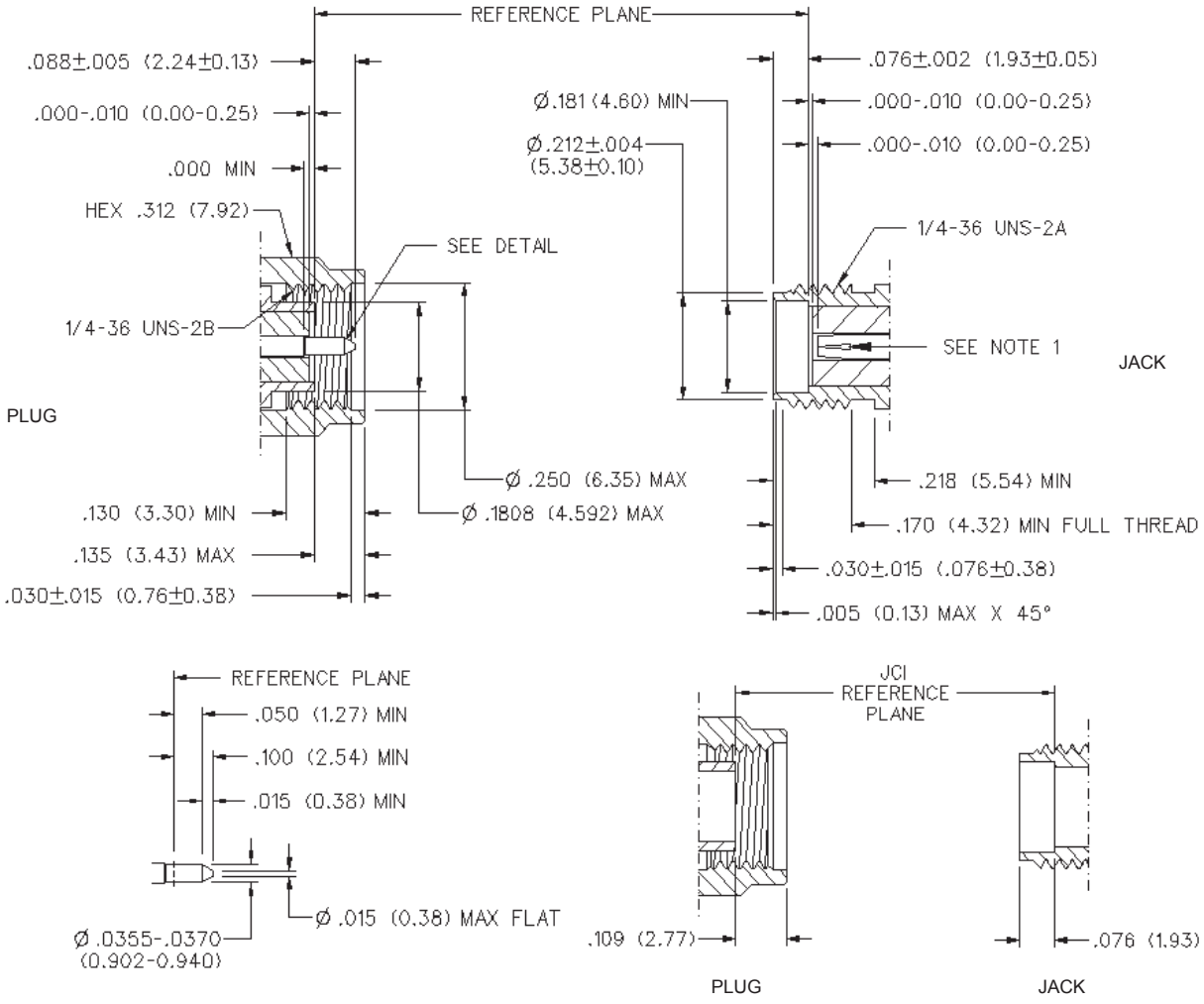
INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

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.