

142-5303-401	4
142-5303-406	4
142-5304-401	4
142-5304-406	4
142-5307-401	4
142-5307-406	4
142-5308-401	4
142-5308-406	4
142-5403-001	3
142-5403-006	3
142-5403-101	3, 4
142-5403-106	3, 4
142-5404-001	3
142-5404-006	3
142-5404-101	3
142-5404-106	3
142-5407-001	3
142-5407-006	3
142-5407-101	3, 4
142-5407-106	3, 4
142-5408-001	3
142-5408-006	3
142-5408-101	3
142-5408-106	3
142-5435-001	3
142-5435-006	3
142-5435-101	4
142-5435-106	4
142-5439-001	3
142-5439-006	3
142-5439-101	4
142-5439-106	4
142-5701-201	5
142-5701-206	5
142-5701-501	5
142-5701-506	5
142-5701-811	5
142-5701-816	5
End Launch Bulkhead Jack Receptacle	5
Right Angle Bulkhead Jack Receptacle	5
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Right Angle Crimp Type Plug - Captivated Contact	3
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Straight Crimp Type Plug -	3
Straight Crimp Type Plug - Solder or Crimp	3
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SMA Reverse Thread connectors for FCC Rule 15

FCC regulation (Part 15.203) stipulates that wireless devices with removable antennas require a non-standard antenna connection to the hand-held device. To meet this requirement, Johnson Components® designs and manufactures non-standard mating SMA connectors.

The least costly method is to simply employ reverse threads (left hand). Reverse threads completely prevent intermate with standard connectors. The threads are produced with minor changes to our machining process, so the cost is similar to a standard interface. Johnson Components® carries a full line of cabled straight and right angle plugs and bulkhead jacks; along with straight and right angle bulkhead jack receptacles and a pc end launch jack receptacle in the reverse thread style and right angle bulkhead jack receptacles and an end launch jack receptacle in the reverse polarity style.

SMA Reverse Thread - 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	1.15 + .01f	1.15 + .02f
RG-142 cable	1.15 + .01f	1.15 + .02f
LMR-200, LMR-240 cable	1.10 + .03f	1.10 + .06f
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	8

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 connectors06	\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 LMR-195, 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

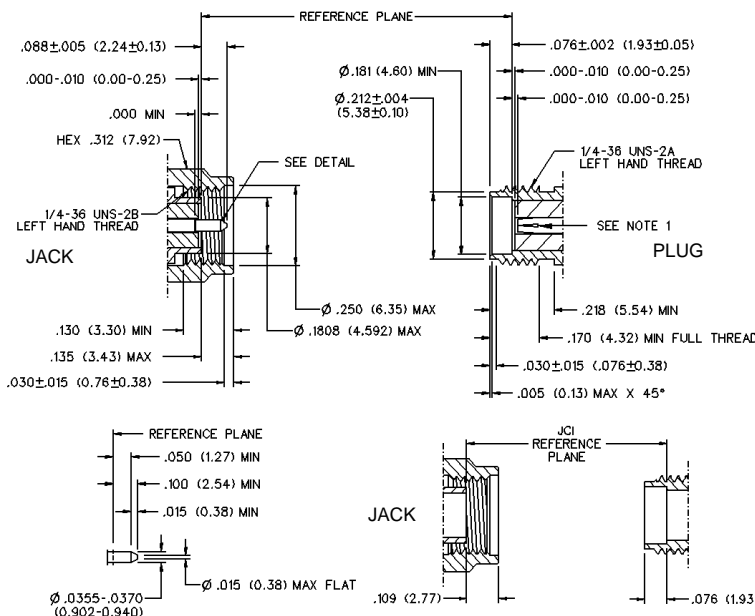
Insulators: PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457 or Tefzel per ASTM D 3159

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

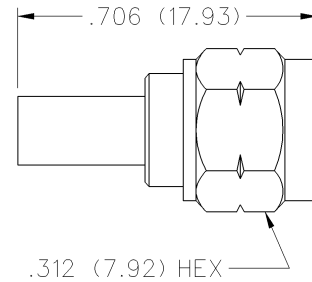
Mating Engagement for SMA Reverse Thread Series per FCC Rule 15 Non-Standard Interface



NOTES

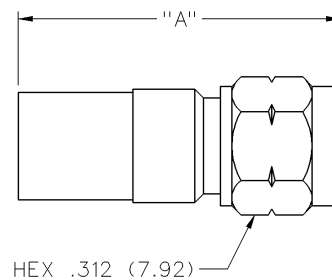
1. ID OF CONTACT TO MEET VSWR, CONTACT RESISTANCE AND INSERTION WITHDRAWAL FORCES WHEN MATED WITH DIA .0355-.0370 MALE PIN.

Straight Crimp Type Plug - Solder or Crimp Captivated Contact



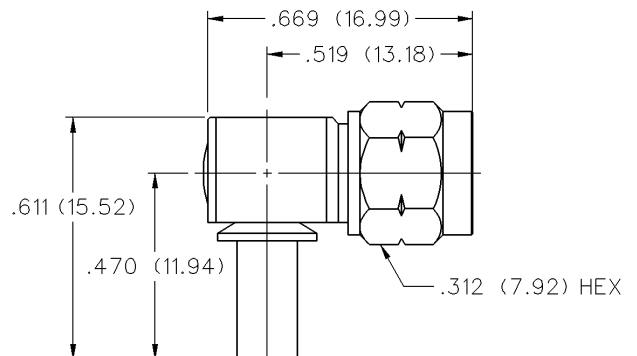
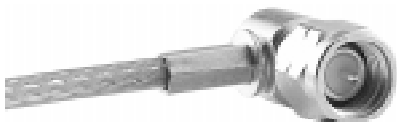
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG 316/U, 188, 174, 161	142-5403-001	142-5403-006
RG 316 DS, 188DS	142-5404-001	142-5404-006
RG 58/U, 141, 303	142-5407-001	142-5407-006
RG 142/U, 55, 223, 400	142-5408-001	142-5408-006

Straight Crimp Type Plug - Captivated Contact Low Loss Cable



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
LMR-100, HPF-100, RF-100	1.15 + .02 f (GHz) 0-12.4 GHz	142-5403-001	142-5403-006	.706 (17.93)
LMR-195, HPF-195, RF-195	1.15 + .01 f (GHz) 0-12.4 GHz	142-5407-001	142-5407-006	.706 (17.93)
LMR-200, HPF-200, RF-200	1.10 + .03f (GHz) 0-12.4 GHz	142-5439-001	142-5439-006	.844 (21.44)
LMR-240, HPF-240, RF-240	1.10 + .03f (GHz) 0-12.4 GHz	142-5435-001	142-5435-006	.844 (21.44)

Right Angle Crimp Type Plug - Captivated Contact



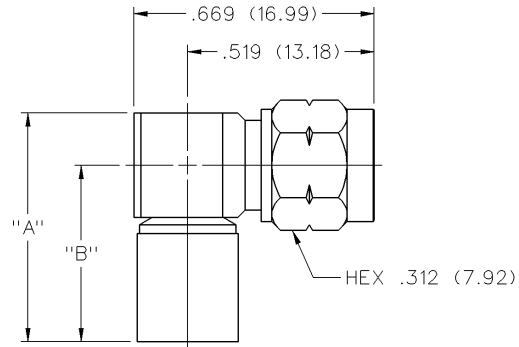
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG 316/U, 188, 174, 161	142-5403-101	142-5403-106
RG 316 DS, 188DS	142-5404-101	142-5404-106
RG 58/U, 141, 303	142-5407-101	142-5407-106
RG 142/U, 55, 223, 400	142-5408-101	142-5408-106

SMA Reverse Thread - 50 Ohm

For Flexible Cable

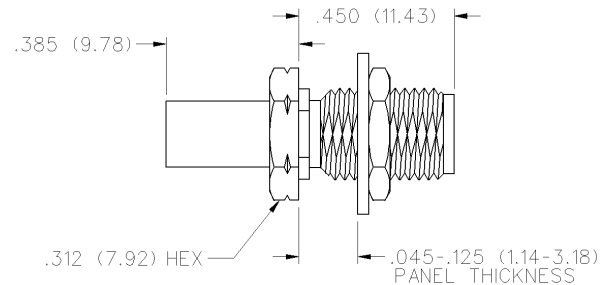
INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

Right Angle Crimp Type Plug - Captivated Contact Low Loss Cable

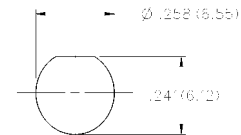


CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"	"B"
LMR-100, HPF-100, RF-100	1.15 + .03f (GHz) 0-12.4 GHz	142-5403-101	142-5403-106	.611 (15.52)	.470 (11.94)
LMR-195, HPF-195, RF-195	1.15 + .02f (GHz) 0-12.4 GHz	142-5407-101	142-5407-106	.611 (15.52)	.470 (11.94)
LMR-200, HPF-200, RF-200	1.10 + .06f (GHz) 0-12.4 GHz	142-5439-101	142-5439-106	.611 (15.52)	.470 (11.94)
LMR-240, HPF-240, RF-240	1.10 + .06f (GHz) 0-12.4 GHz	142-5435-101	142-5435-106	.635 (16.13)	.490 (12.45)

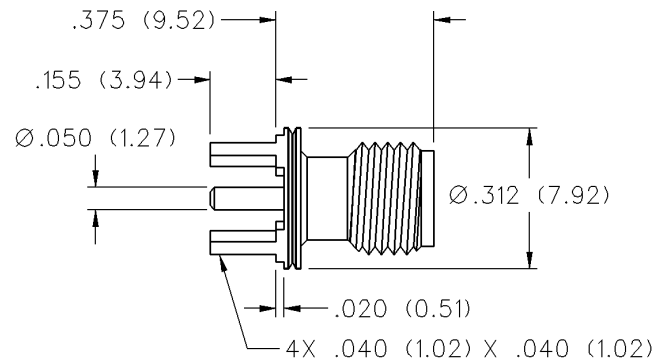
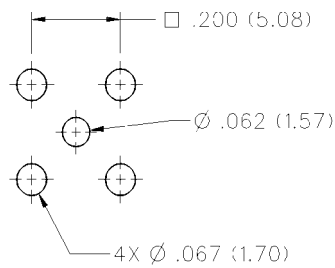
Straight Crimp Type Bulkhead Jack - Solder or Crimp Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG 316/U, 188, 174, 161	142-5303-401	142-5303-406
RG 316 DS, 188DS	142-5304-401	142-5304-406
RG 58/U, 141, 303	142-5307-401	142-5307-406
RG 142/U, 55, 223, 400	142-5308-401	142-5308-406



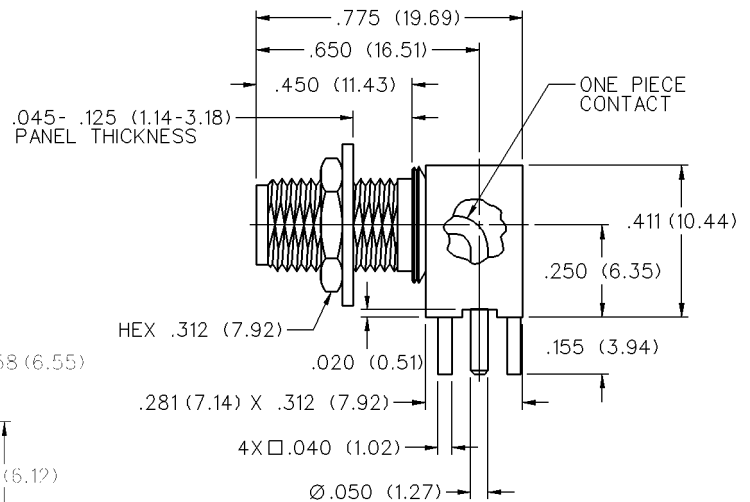
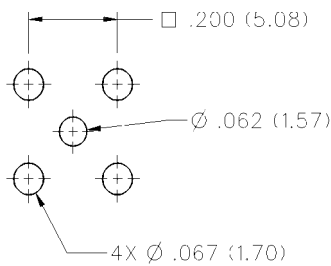
Straight Jack Receptacle



GOLD PLATED	NICKEL PLATED
142-5701-201	142-5701-206

Mounting hole layout figure 2 page 174.

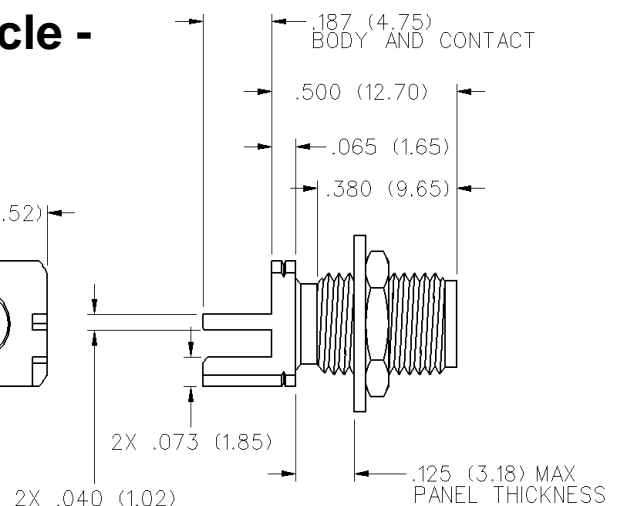
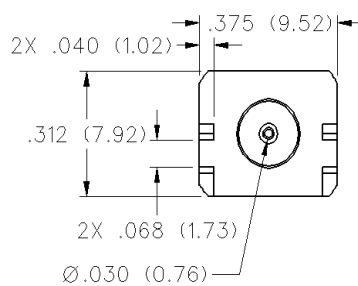
Right Angle Bulkhead Jack Receptacle



GOLD PLATED	NICKEL PLATED
142-5701-501	142-5701-506

Mounting hole layout figure 1 and 2 page 174.

End Launch Bulkhead Jack Receptacle - Round Contact



GOLD PLATED	NICKEL PLATED	BOARD THICKNESS
142-5701-811	142-5701-816	.062 (1.57)