

142-4303-401	4
142-4303-406	4
142-4304-401	4
142-4304-406	4
142-4307-401	4
142-4307-406	4
142-4308-401	4
142-4308-406	4
142-4403-001	3
142-4403-006	3
142-4403-101	3, 4
142-4403-106	3, 4
142-4404-001	3
142-4404-006	3
142-4404-101	3
142-4404-106	3
142-4407-001	3
142-4407-006	3
142-4407-101	3, 4
142-4407-106	3, 4
142-4408-001	3
142-4408-006	3
142-4408-101	3
142-4408-106	3
142-4435-001	3
142-4435-006	3
142-4435-101	4
142-4435-106	4
142-4439-001	3
142-4439-006	3
142-4439-101	4
142-4439-106	4
142-4701-201	5
142-4701-206	5
142-4701-501	5
142-4701-506	5
142-4701-801	5
142-4701-806	5
End Launch Bulkhead Jack Receptacle	5
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Straight Crimp Type Plug - Captivated Contact	3
Straight Crimp Type Plug - Solder or Crimp	3
Straight Jack Receptacle	5

SMA Reverse Polarity 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.

Reverse polarity connectors employ female contacts in the plug connector and male contacts in the jack connector. Johnson Components® manufactures straight and right angle cabled plugs and bulkhead jacks; along with straight and right angle bulkhead jack receptacles and an end launch jack receptacle in the reverse polarity style.

SMA Reverse Polarity - 50 Ohm

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	Right Angle
	Cabled Connectors	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 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

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

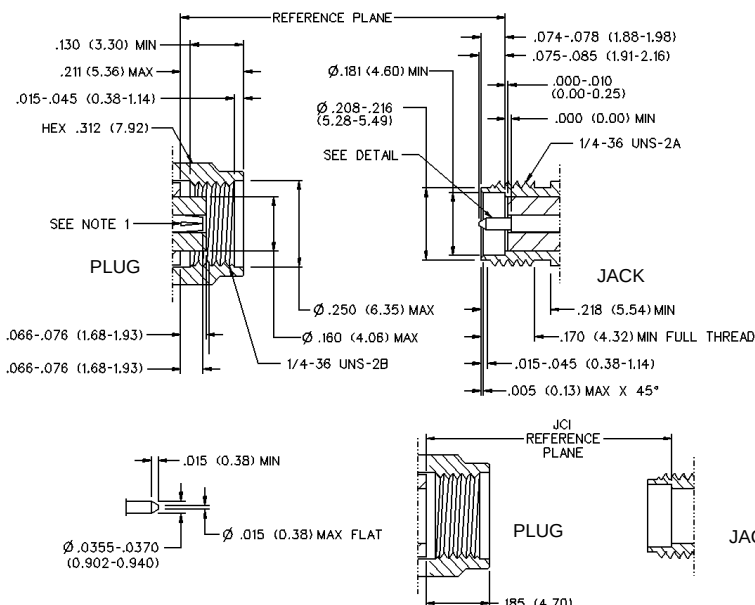
Insulators: PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457 or Tefzel per ASTM D 3159

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

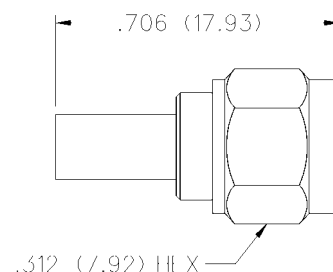
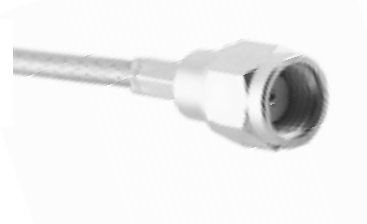
MATING ENGAGEMENT FOR SMA REVERSE POLARITY SERIES PER FCC RULE 15 NON-STANDARD INTERFACE



NOTES

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

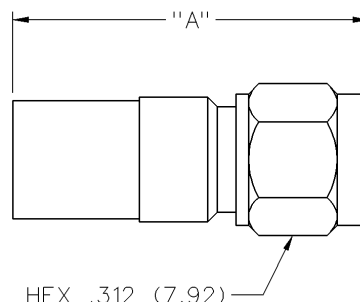
Straight Crimp Type Plug - Solder or Crimp Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG 316/U, 188, 174, 161	142-4403-001	142-4403-006
RG 316 DS, 188DS	142-4404-001	142-4404-006
RG 58/U, 141, 303	142-4407-001	142-4407-006
RG 142/U, 55, 223, 400	142-4408-001	142-4408-006

Assembly instructions page 158.
See page 132 for Cable Assembly Tools.

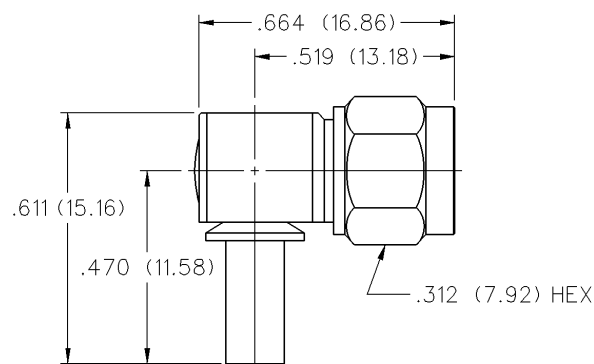
Straight Crimp Type Plug - Captivated Contact Low Loss Cable



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	142-4403-001	142-4403-006	.706 (17.93)
LMR-195, HPF-195, RF-195	1.17 + .025 f (GHz) 0-12.4 GHz	142-4407-001	142-4407-006	.706 (17.93)
LMR-200, HPF-200, RF-200	1.10 + .07 f (GHz) 0-12.4 GHz	142-4439-001	142-4439-006	.844 (21.44)
LMR-240, HPF-240, RF-240	1.10 + .07 f (GHz) 0-12.4 GHz	142-4435-001	142-4435-006	.844 (21.44)

Assembly instructions pages 158
and 159. See page 132 for Cable
Assembly Tools.

Right Angle Crimp Type Plug - Captivated Contact



CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG 316/U, 188, 174, 161	142-4403-101	142-4403-106
RG 316 DS, 188DS	142-4404-101	142-4404-106
RG 58/U, 141, 303	142-4407-101	142-4407-106
RG 142/U, 55, 223, 400	142-4408-101	142-4408-106

Assembly instructions page 161.
See page 132 for Cable Assembly Tools.

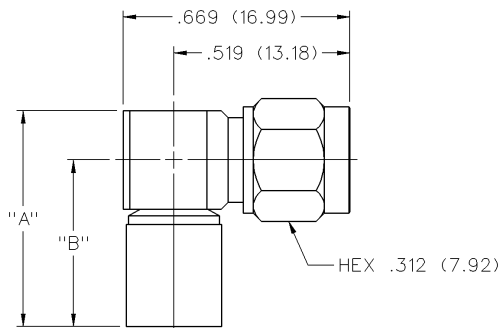
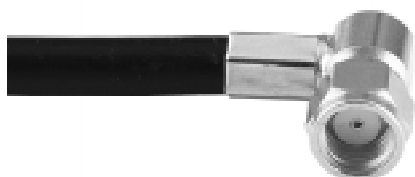
SMA Reverse Polarity - 50 Ohm

For Flexible Cable

JOHNSON
Components®

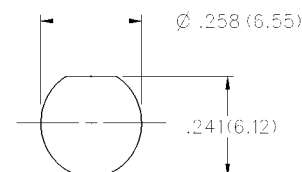
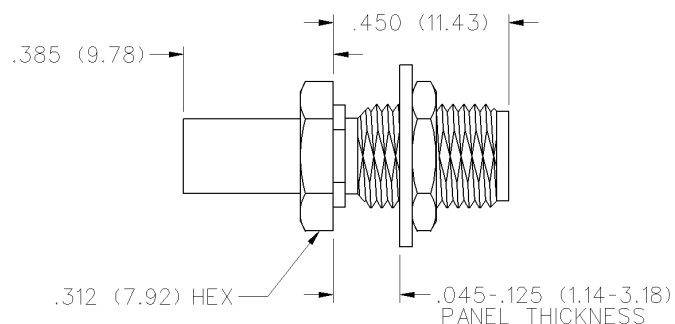
INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

Right Angle Crimp Type Plug - Captivated Contact Low Loss Cable



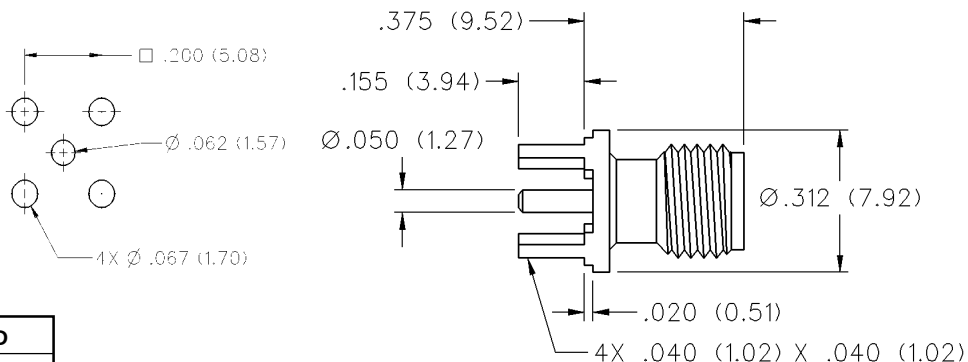
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"	"B"
LMR-100, HPF-100, RF-100	1.15 + .03 f (GHz) 0-12.4 GHz	142-4403-101	142-4403-106	.611 (15.52)	.470 (11.94)
LMR-195, HPF-195, RF-195	1.17 + .06f (GHz) 0-12.4 GHz	142-4407-101	142-4407-106	.611 (15.52)	.470 (11.94)
LMR-200, HPF-200, RF-200	1.10 + .09f (GHz) 0-12.4 GHz	142-4439-101	142-4439-106	.611 (15.52)	.470 (11.94)
LMR-240, HPF-240, RF-240	1.10 + .09f (GHz) 0-12.4 GHz	142-4435-101	142-4435-106	.635 (16.13)	.490 (12.45)

Straight Crimp Type Bulkhead Jack - Captivated Contact



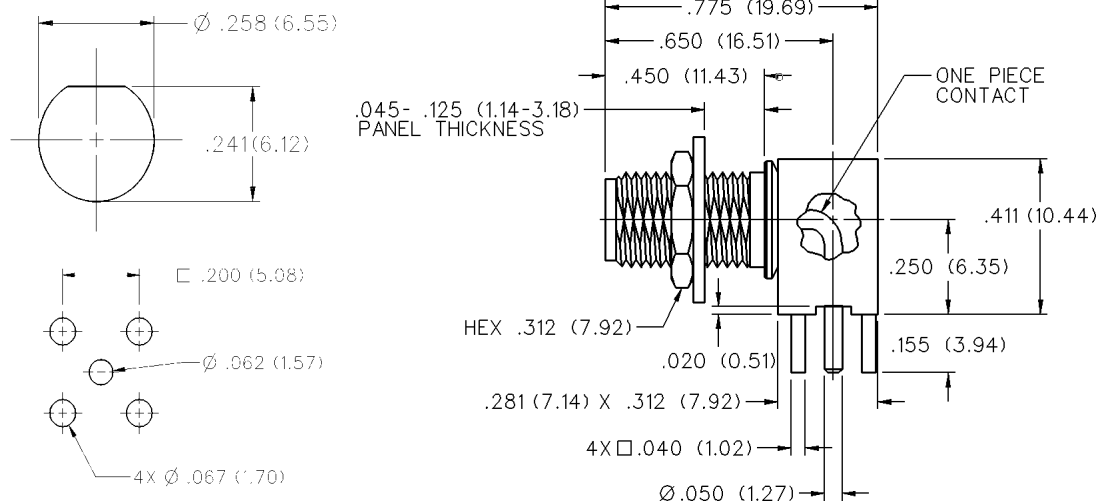
CABLE TYPE	GOLD PLATED	NICKEL PLATED
RG 316/U, 188, 174, 161	142-4303-401	142-4303-406
RG 316 DS, 188DS	142-4304-401	142-4304-406
RG 58/U, 141, 303	142-4307-401	142-4307-406
RG 142/U, 55, 223, 400	142-4308-401	142-4308-406

Straight Jack Receptacle



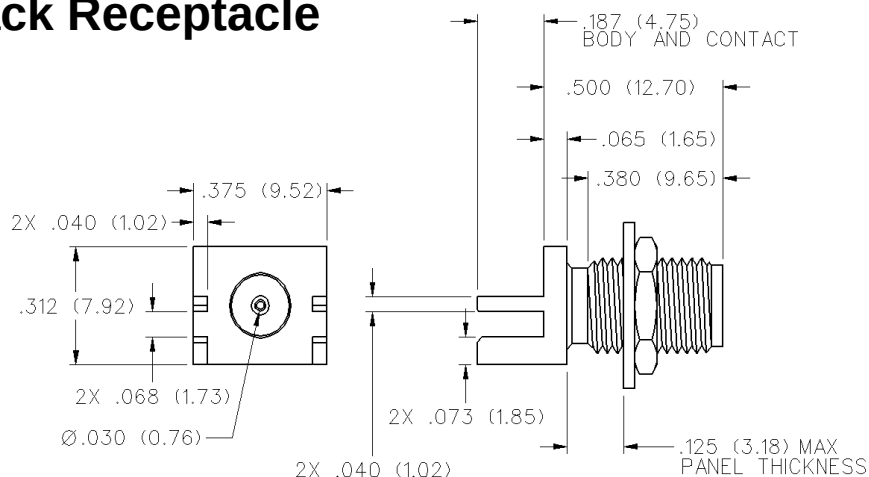
GOLD PLATED	NICKEL PLATED
142-4701-201	142-4701-206

Right Angle Bulkhead Jack Receptacle



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

End Launch Bulkhead Jack Receptacle



GOLD PLATED	NICKEL PLATED	BOARD THICKNESS
142-4701-801	142-4701-806	.062 (1.57)