

ELECTRICAL RATINGS

Impedance: 50 Ohms

Frequency Range: 0-6 GHz

VSWR: (f = GHz)

	Straight Cabled Connectors	Right Angle Cabled Connectors
RG-316 cable	1.13 + .04f	1.07 + .04f
Uncabled receptacles		N/A

Working Voltage: (Vrms maximum)†

Connectors for Cable Type	Sea Level	70K Feet
RG-316	335	85

Dielectric Withstanding Voltage: (VRMS minimum at sea level)

Connectors for RG-316, uncabled receptacles	1000
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Corona Level: (Volts minimum at 70,000 feet)

Connectors for RG-316, uncabled receptacles	250
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Insertion Loss: (dB maximum, tested at 1 GHz)

Straight cable connectors	0.1 dB
Right angle cable connectors	0.2 dB
Uncabled receptacles	N/A

Insulation Resistance: 10,000 megohms minimum

Contact Resistance: (milliohms maximum)

	Initial	After Environmental
Center contact (straight cabled connectors, uncabled receptacles)	5.0	8.0
Center contact (right angle cabled connectors)	5.0	15.0
Outer contact	1.0	1.5
Braid to body	1.0	N/A

RF Leakage: (dB typical tested at 2.5 GHz)

Cable connectors	-55
Uncabled receptacles	N/A

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

Cabled connectors	700
Uncabled receptacles	600

MECHANICAL RATINGS

Engagement Design: Compatible with CECC 22220, Series MCX

Engagement Force: 5.6 pounds maximum axial force

Disengagement Force: 8 pounds maximum axial force, 1 pound min.

Contact Retention: 2.3 pounds min. axial force (captivated contacts)
1 inch-ounce min. torque (uncabled receptacles)

Cable Retention:	Axial Force* (pounds)	Torque (in-oz)
Connectors for RG316	20	N/A
Connectors for RG316DS	25	N/A

* or cable breaking strength whichever is less.

ENVIRONMENTAL RATINGS (Meets or exceed the applicable paragraph of MIL-PRF-39012)

Durability: 500 cycles minimum

Temperature Range: - 65°C to + 165°C

Thermal Shock: MIL-STD-202, Method 107, Condition F

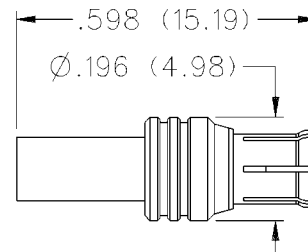
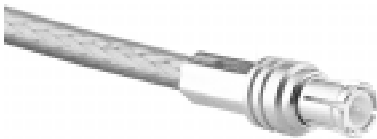
Corrosion: MIL-STD-202, Method 101, Condition B

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

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

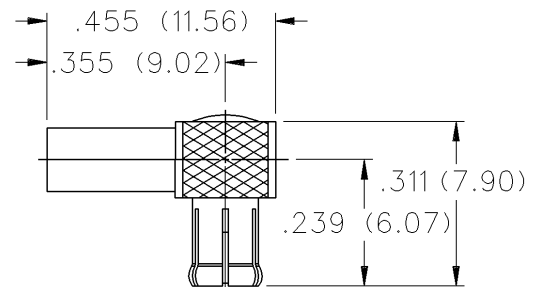
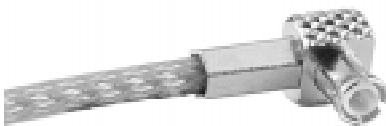
Moisture Resistance: MIL-STD-202, Method 106

Straight Crimp Type Plug - Solder or Crimp Contact - Captivated Contact



CABLE TYPE	GOLD PLATED
RG-316/u, 188, 174	133-9403-001
RG-316 DS, 188 DS	133-9404-001

Right Angle Crimp Type Plug - Captivated Contact



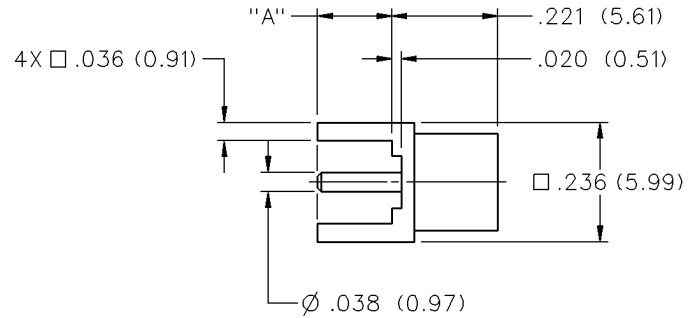
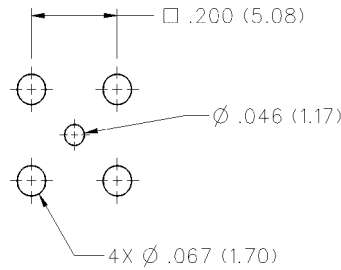
CABLE TYPE	GOLD PLATED
RG-316/u, 188, 174	133-9403-101
RG-316 DS, 188 DS	133-9404-101

MCX Non-Magnetic RF Connectors

PC Mount

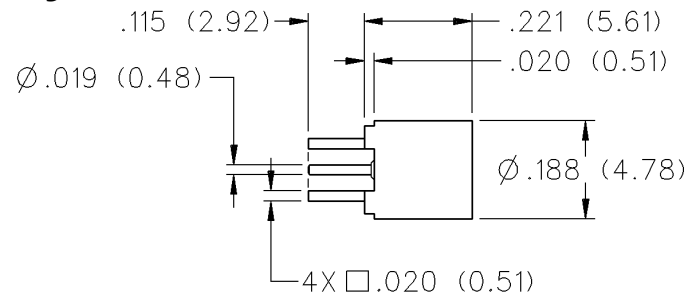
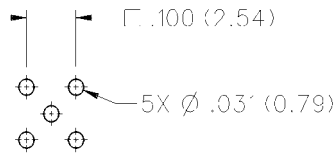
INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

Straight Jack Receptacle



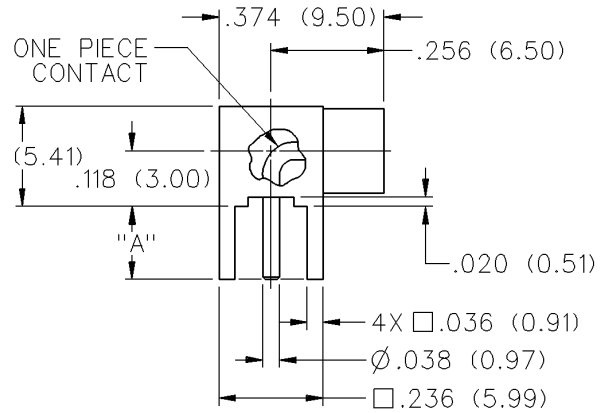
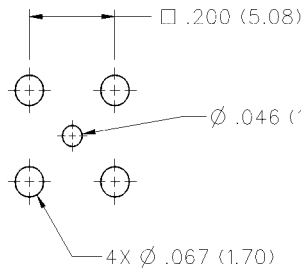
DIMENSION "A"	GOLD PLATED
.155 (3.94)	133-9701-201
.110 (2.79)	133-9701-211

Straight Jack Receptacle - .100" Layout



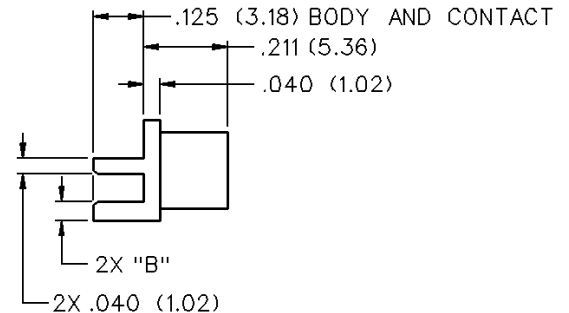
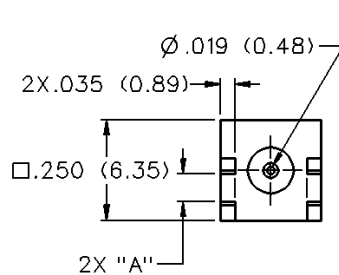
GOLD PLATED
133-9701-231

Right Angle Jack Receptacle



"A"	GOLD PLATED
.155 (3.94)	133-9701-301
.110 (2.79)	133-9701-311

End Launch Jack Receptacle - Round Contact

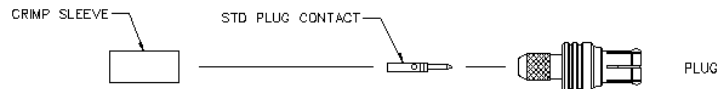
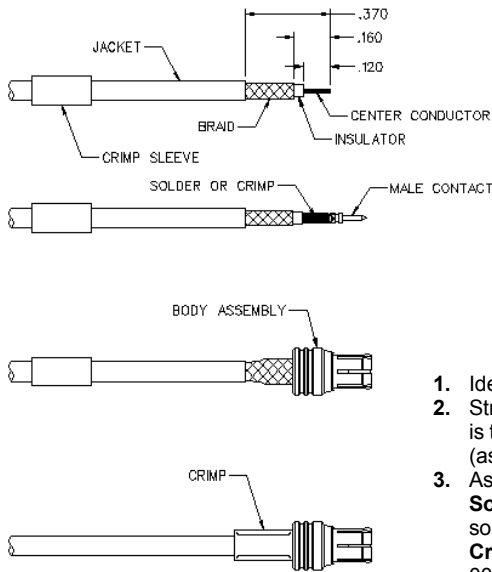


BOARD THICKNESS	GOLD PLATED	"A"	"B"
.062 (1.57)	133-9701-801	.068 (1.73)	.048 (1.22)

MCX Non-Magnetic RF Connectors Cable Assembly Instructions

MCX Crimp Type Straight Connectors For Flexible Cable

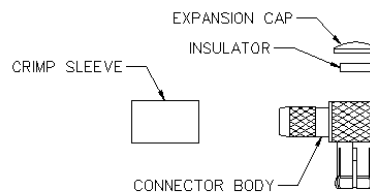
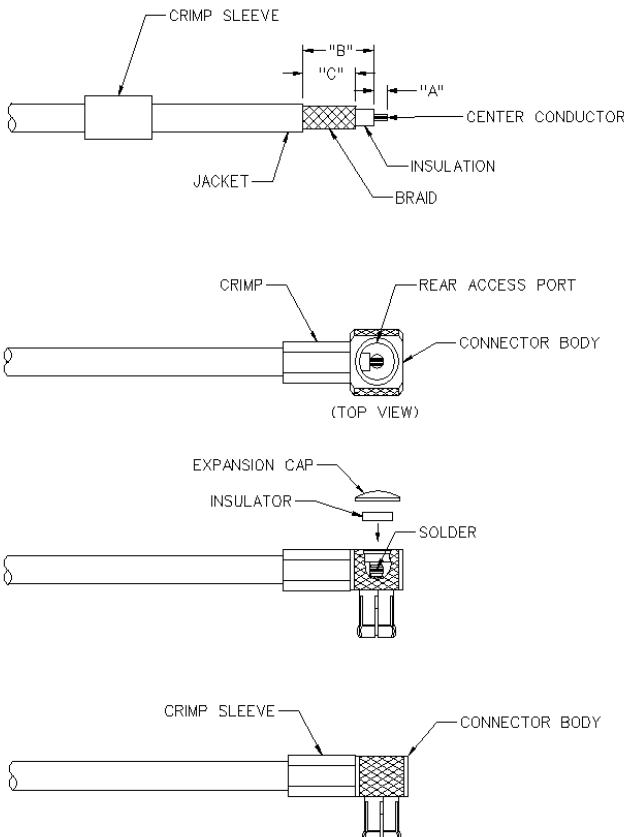
CABLE GROUP	PART NUMBER	CRIMP HEX
RG-316/u, 188, 174	133-9403-001	.128 (3.25)
RG-316DS, 188DS	133-9404-001	.151 (3.83)



1. Identify connector parts. (3 piece parts)
2. Strip cable to dimensions shown. Do not nick braid or center conductor. Tin center conductor if contact is to be solder attached. Do not tin center conductor if contact is to be crimp attached. Slide heat shrink (as applicable) and crimp sleeve onto jacket of cable.
3. Assemble contact onto cable as shown.
Solder attachment. Solder contact to center conductor through solder hole using .020 (0.51) diameter solder. Use a minimum of solder for a good joint.
Crimp attachment. Crimp contact to center conductor using Johnson Components™ hand tool 140-0000-952 and die set 140-0000-953. Crimp location should be centered between end of contact and cross hole. Crimp attachment to solid center conductor cable is not recommended.
4. Flair braid and slide body assembly over contact and under braid. Then seat body assembly firmly onto contact. The cable may have to be held in a clamping fixture. Arrange braid uniformly around crimp stem. Slide crimp sleeve forward and crimp using recommended crimp tool. Slide heat shrink forward and shrink (as applicable).

MCX Crimp Type Right Angle Plugs For Flexible Cable

CABLE GROUP	PART NUMBER	"A"	"B"	"C"	CRIMP HEX
RG-316/u, 188, 174	133-9403-101	.050 (1.27)	.270 (6.86)	.200 (5.08)	.128 (3.25)
RG-316DS, 188DS	133-9404-101	.050 (1.27)	.270 (6.86)	.200 (5.08)	.151 (3.83)



1. Identify connector parts. (4 piece parts)
2. Strip cable to dimensions shown. Do not nick braid or center conductor. A wire stripper of correct size is recommended for this step. Twist stranded center conductor into tight bundle and tin (optional). Slide crimp sleeve onto cable shown.
3. Flair braid and slide cable into body making certain that the cable insulation bottoms on center contact. Arrange braid uniformly around crimp stem. Slide crimp sleeve over braid and crimp securely using recommended crimp tool.
4. Solder center conductor to contact through rear access port. Use a minimum amount of solder for a full fillet joint. **.020 (0.51) diameter solder is recommended.**
5. Assemble insulator if applicable then place expansion cap in access port and seat with .156 (3.96) diameter flat punch or MCX hand assembly tool 141-0000-908. Shrink heat shrink tubing over crimp sleeve if applicable.