

RF Coaxial Connectors

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MMCX Connectors

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For more information, please see the last page of the catalog for the location nearest you or contact:

molex® Molex Custom Product Overview

Features and Benefits

- Frequencies to 50GHz
- Special configurations, interfaces and sizes available
- Available at all volumes
- Non-tarnishing solderable and nonmagnetic surface finishes are available with negligible intermodulation

Molex RF/Microwave connectors include custom designs to meet the requirements of special applications. Most custom designs have standard interfaces, but they include feature(s) that result in a custom-designed product.

Some custom designs include unique mating interfaces. Special application custom connectors, including a series designated APT1000, can be designed for a user's particular needs.

Contact either our US or Taiwan location to discuss your custom-designed product requirements with a Molex application engineer.



FEATURES AND SPECIFICATIONS

Features and Benefits

- Micro miniature
- Snap-on coupling
- DC to 6 GHz

Engineering

Nominal Impedance: 50Ω
Frequency Range: DC-6 GHz

Mechanical

Force to Engage: Axial Force 15N (3.4 lb) max.
Force to Disengage: Axial Force 6N to 15N (1.4 to 3.4 lb)
Connector Durability: 500 Cycles
Center Contact Retention: Axial Force—10N (2.3 lb)
Cable Retention: Axial Force—32.7N (7.3 lb)

Electrical

Voltage Rating: Sea Level—170 Vrms
Insulation Resistance: 1000 M Ω
Dielectric Withstanding Voltage: 500 Vrms
Contact Resistance:
Center Contact Initial—5.0m Ω s
Outer Contact —2.5m Ω s
Voltage Standing Wave Ratio:
Cable RG178—1.12 @ 6 GHz
1.08 @ 2.5 GHz
1.04 @ 1 GHz
Edge Mount—1.20 @ 6 GHz
1.10 @ 2.5 GHz
1.05 @ 1 GHz

RF Leakage:

Cabled—60 dB
Edge Mount—60 dB

Environmental

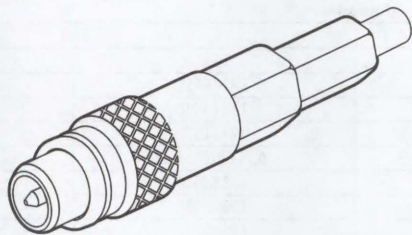
Vibration: MIL-STD-202, Method 204 Test Condition C
Thermal Shock: MIL-STD-202, Method 107 Test Condition F
Corrosion (Salt Spray): MIL-STD-202, Method 101 Test Condition B
Moisture Resistance: MIL-STD-202, Method 106
5 min after removal 200 M Ω

Physical

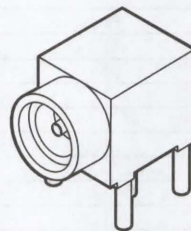
Operating Temperature: -55 to +155°C

molex[®] MMCX Connectors Overview

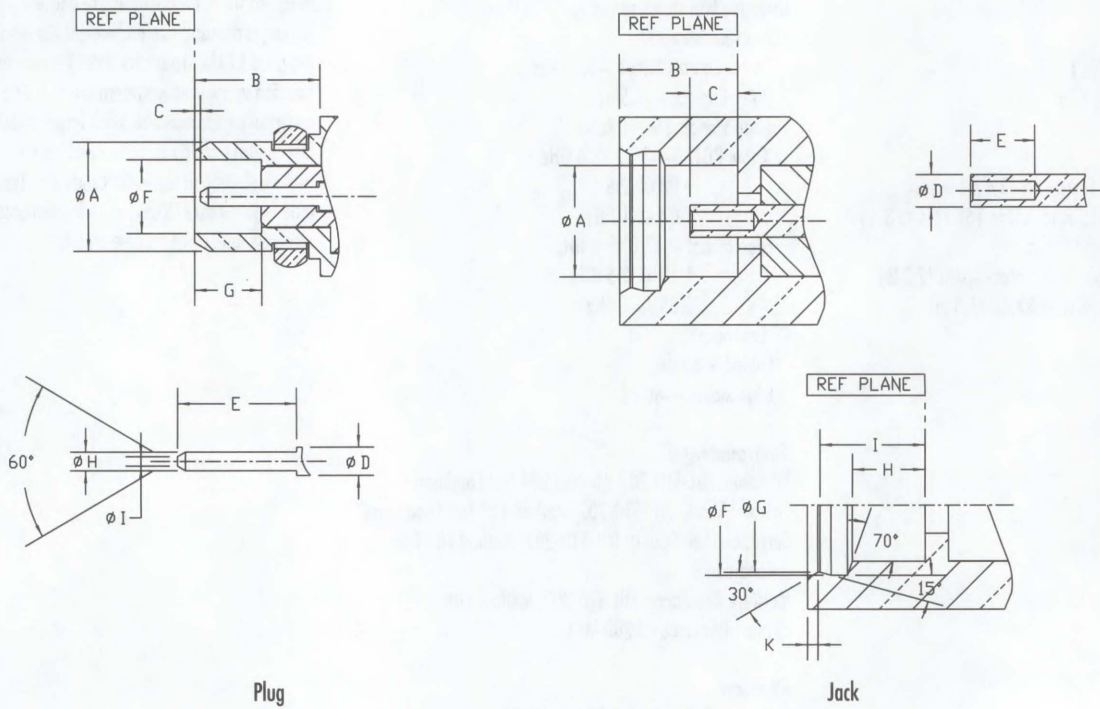
Molex MMCX connectors are a microminiature connector series designed for applications where densely populated electronic packages demand size and weight limitations while maintaining good RF characteristics. MMCX connectors are designed to function in applications operating to 6 GHz and offer similar electrical performance to much larger coaxial connector types. Mechanical stability is maintained via a snap fit interface that uses no slotting in the outer conductor. Typical applications include wireless/PCS devices, telecommunications, GPS receivers, and consumer electronics.



Straight Crimp/Crimp Plug



Right Angle PCB Jack Receptacle



Plug

Jack

INTERFACE MATING DIMENSIONS

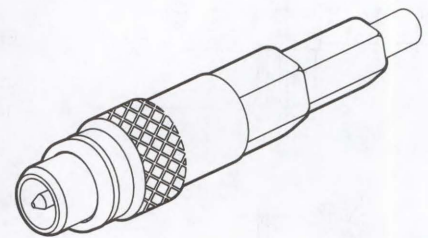
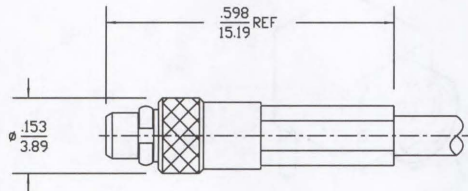
	Dimension			
	Plug		Jack	
	min.	max.	min.	max.
A (dia.)		2.40 (.094)	2.41 (.095)	
B	2.70 (.106)		2.60 (.102)	
C	0.00 (.000)	0.25 (.010)	0.89 (.035)	1.20 (.047)
D (dia.)	0.71 (.028) nom.	0.71 (.028) nom.	0.71 (.028) nom.	0.71 (.028) nom.
E		3.15 (.124)	1.40 (.055)	
F (dia.)	1.57 (.062)	1.62 (.064)	3.00 (.118)	3.04 (.120)
G	1.45 (.057)		2.88 (.113)	2.90 (.114)
H (dia.)	0.38 (.015)	0.42 (.017)	1.57 (.062)	1.63 (.064)
I (dia.)		0.20 (.008)	2.30 (.091)	2.34 (.092)
K				.023 (.009)

RF Coaxial Connectors

P

- Center contact crimp or solder termination
- Crimp braid termination
- Packaging: Individual

**Plug
Straight
Crimp/Crimp
Cable**

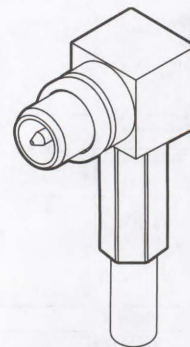
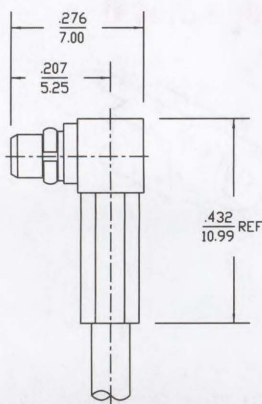


Order No.	Cable Group	Assembly Instructions
73415-0971	RG178, 196	AS-89678-0900
73415-1251	RG188, 174, 316	AS-89678-2700
73415-2101	.086 semi-rigid	AS-89678-2800
73415-2111	.047 semi-rigid	AS-89678-2900
73415-2131	RD174, 188, 316	AS-89678-3000

CATALOG DRAWING (FOR REFERENCE ONLY)

- Center contact solder termination
- Crimp braid termination
- Packaging: Individual

**Plug
Right Angle
Solder/Crimp
Cable**

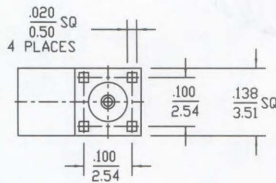
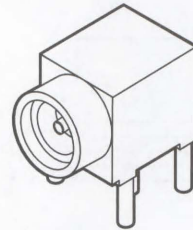
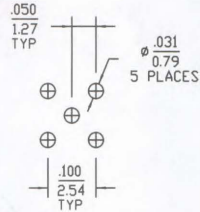
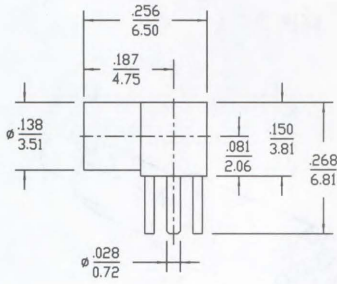


Order No.	Cable Group	Assembly Instructions
73415-0951	RG178, 196	AS-89678-0700
73415-1121	RG174, 188, 316	AS-89678-1700
73415-2141	RD174, 188, 316	AS-89678-3100
73415-2151	.047 semi-rigid	AS-89678-3200
73415-2161	.086 semi-rigid	AS-89678-3300

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Brass
- Overall Plating: Gold
- Packaging: Individual

**Jack Receptacle
Right Angle
PCB**



Recommended PCB Hole Configuration

Order No.
73415-1001

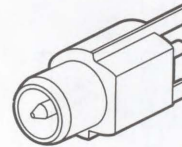
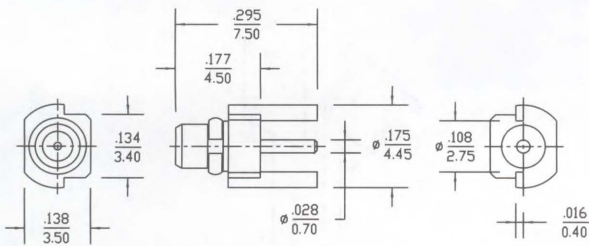
RF Coaxial Connectors

P

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Brass
- Overall Plating: Gold
- Packaging: Individual

**Plug
Edge Mount**

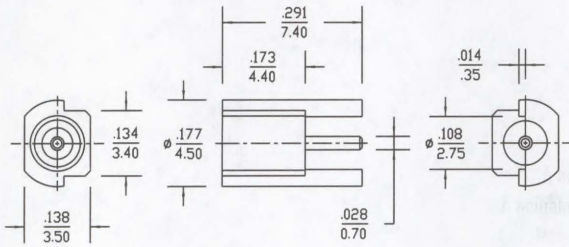
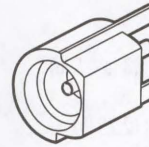


Order No.
73415-0991

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Brass
- Overall Plating: Gold
- Packaging: Individual

**Jack Receptacle
Edge Mount**



Order No.
73415-0961

FEATURES AND SPECIFICATIONS

Features and Benefits

- Subminiature
- Snap-on coupling
- DC to 6 GHz
- 30% smaller than SMB

Engineering

Nominal Impedance: 50Ω
Frequency Range: DC-6 GHz
Voltage Rating: Sea Level—335 Vrms

Mechanical

Force to Engage: Axial Force 25N (5.6 lb) max.
Force to Disengage: Axial Force 8N to 20N (1.8 to 4.5 lb)
Connector Durability: 500 Cycles
Center Contact Retention: Axial Force—10N (2.25 lb)
Cable Retention: Axial Force—49.8N (11.2 lb)

Electrical

Voltage Rating: Sea Level—335 Vrms
Insulation Resistance: 10000 $M\Omega$ min.
Dielectric Withstanding Voltage: 1000 Vrms min.

Contact Resistance

Center Contact Initial— $5.0m\Omega$ max.
Center Contact After Environment— $15m\Omega$ max.
Outer Contact— $2.5m\Omega$ max.
Outer Cable Conductor to Body— $7.5m\Omega$ max.

Voltage Standing Wave Ratio:

Straight —1.30 max. DC-2 GHz
1.35 max. 2-6 GHz
Right Angle—1.50 max. DC-2 GHz
1.65 max. 2 to 6 GHz

Environmental

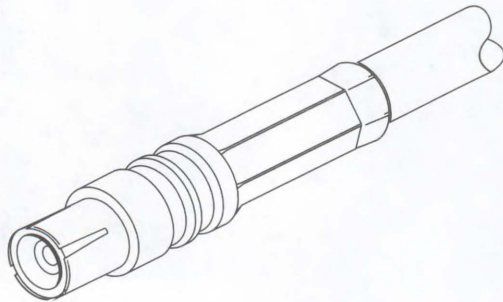
Vibration: MIL-STD-202, Method 204 Test Condition A
Thermal Shock: MIL-STD-202, Method 107 Test Condition A
Corrosion (Salt Spray): MIL-STD-202, Method 101 Test Condition B
Mechanical Shock: MIL-STD-202, Method 213 Test Condition A
Moisture Resistance: MIL-STD-202, Method 106

Physical

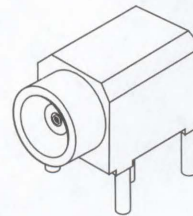
Operating Temperature: -55 to +85°

molex® MCX Connectors Overview

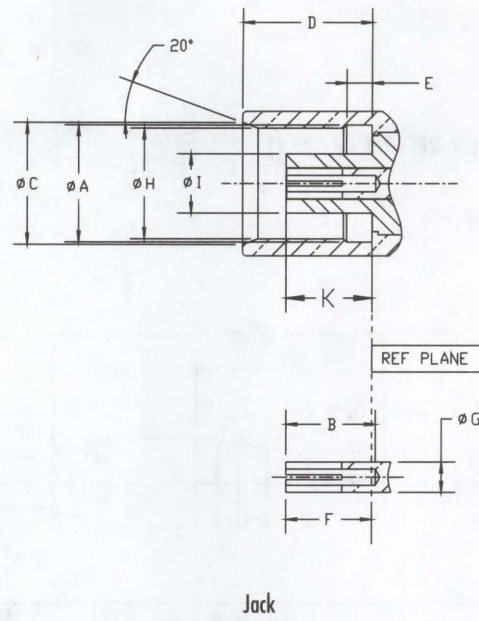
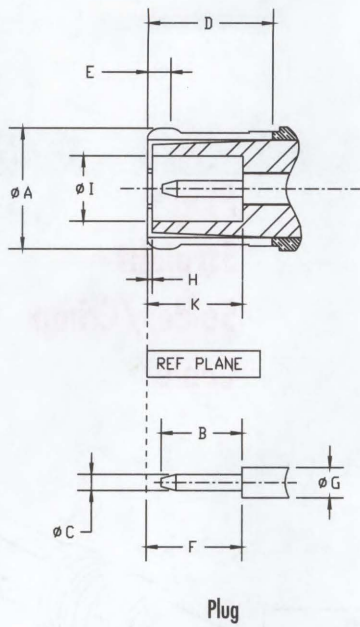
Molex MCX connectors are a subminiature snap-on connector offering a stable and durable connection while allowing electronic assemblies to be more densely packaged than other sub-miniature series. MCX connectors are approximately 30% smaller than SMB type connectors but use the same proven internal interconnect arrangement with respect to the dielectric and center contact. The MCX series provides good electrical performance to 6 GHz and used in telecommunication systems as well as wireless and GPS applications.



Straight Solder/Crimp Plug



Right Angle PCB Jack Receptacle



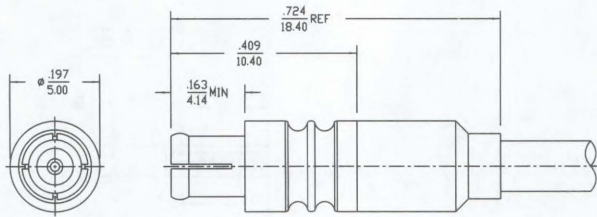
INTERFACE MATING DIMENSIONS

	Dimension			
	Plug		Jack	
	min.	max.	min.	max.
A (dia.)	3.71 (.146)*	3.80 (.150)*	3.60 (.142)	3.71 (.146)
B	2.49 (.098)	2.59 (.102)	2.80 (.110)	
C (dia.)	0.48 (.019)	0.53 (.021)	3.75 (.148)	3.85 (.152)
D	4.15 (.163)		4.00 (.157)	4.12 (.162)
E	0.70 (.028)	0.75 (.030)	0.75 (.030)	0.85 (.033)
F	2.80 (.110)	3.20 (.126)	2.30 (.091)	2.80 (.110)
G (dia.)	0.95 (.037) nom.	0.95 (.037) nom.	0.95 (.037) nom.	0.95 (.037) nom.
H (dia.)		3.05 (0.12)	3.42 (.135)	3.48 (.137)
I	2.00 (.079)	2.07 (.081)	1.80 (.071)	1.98 (.078)
K	2.80 (.110)	3.20 (.126)	2.60 (.102)	2.80 (.110)

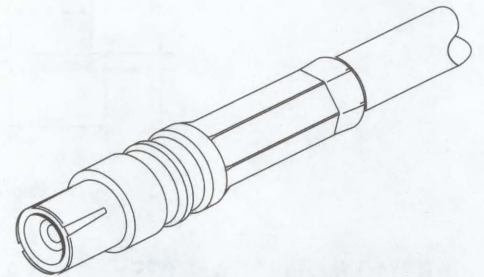
* Prior to slotting

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Nickel
- Center contact solder termination
- Packaging: Tray



**Plug
Straight
Solder/Crimp
Cable**

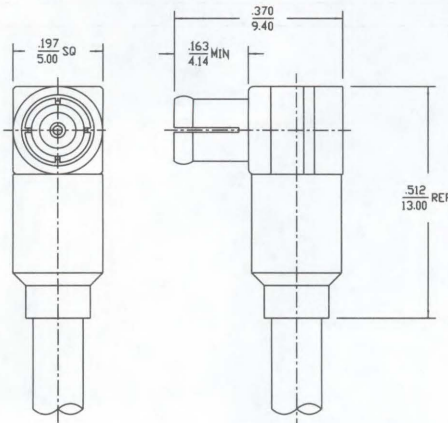


Order No.	Cable Group	Assembly Instructions
73366-0020	RG174, 179, 187, 188, 316	AS-73392-006

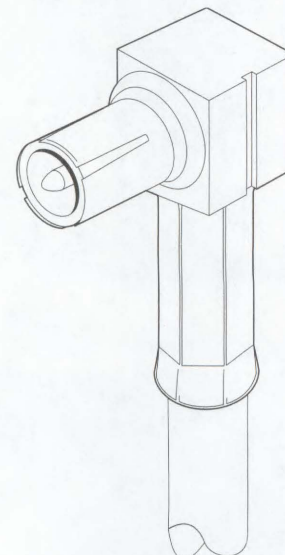
RF Coaxial Connectors

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Nickel
- Center contact solder termination
- Packaging: Tray



**Plug
Right Angle
Solder/Crimp
Cable**



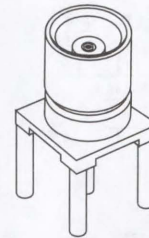
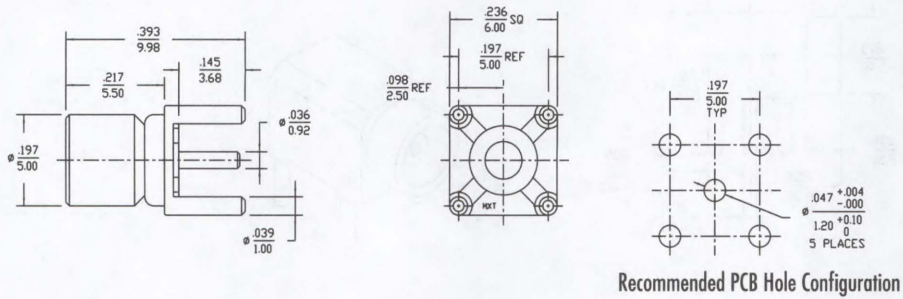
Order No.	Cable Group	Assembly Instructions
73366-0010	RG174, 179, 187, 188, 316	AS-73392-005

P

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Nickel/Tin Lead
- Body: Brass
- Packaging: Tray

**Jack Receptacle
Vertical
PCB**

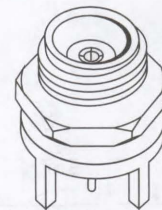
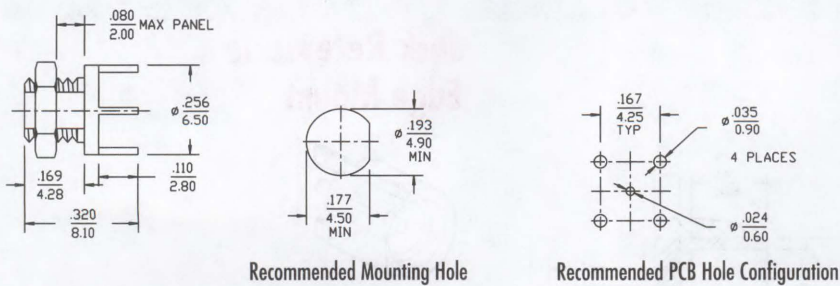


Order No.
73366-0000

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Brass
- Overall Plating: Gold

**Jack Receptacle
Vertical
Bulkhead Mount
PCB**



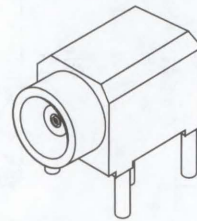
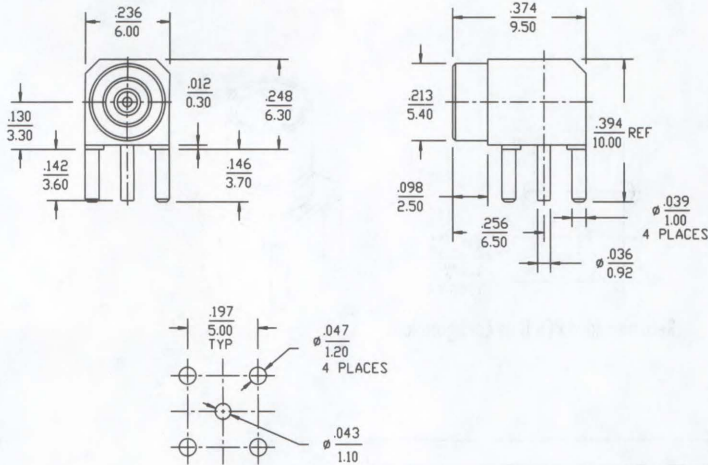
Order No.
73415-1040



CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Brass
- Overall Plating: Nickel/Tin Lead

**Jack Receptacle
Right Angle
PCB**



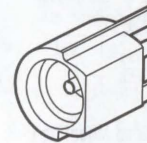
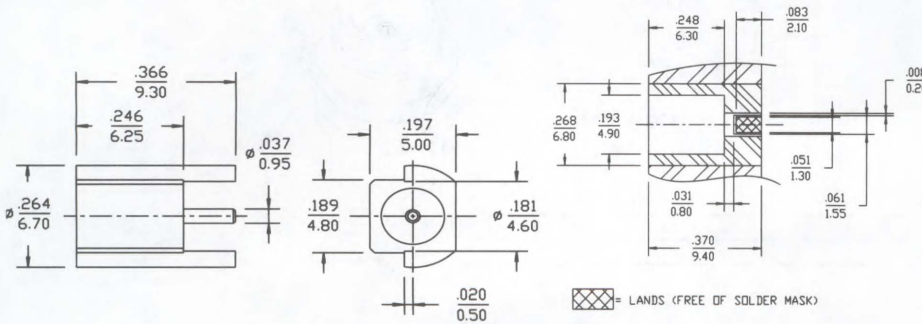
Recommended PCB Hole Configuration

Order No.
73366-0030

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Brass
- Overall Plating: Gold

**Jack Receptacle
Edge Mount**



Recommended Mounting Hole

Order No.
73415-1060

SMB OVERVIEW

Features and Benefits

- Subminiature
- Snap-on coupling
- DC to 4 GHz
- 50 and 75Ω

Molex SMB connectors are a subminiature connector series designed for applications operating to 4 GHz. This series includes a snap on interface that is controlled by industry standard specifications and is easy to connect and disconnect. Mechanical stability is provided by the SMB interface, and its relatively small size allows it to be used in applications where space is limited. Each 50Ω product has a mini 75Ω SMB counterpart which has the same external envelope as the 50Ω product. Applications for 50Ω product includes telecommunications equipment, instrumentation and commercial broadcast equipment. The mini 75Ω SMB products are typically used in data and video transmission equipment.

Engineering

Nominal Impedance	Frequency Range	Voltage Rating - Sea Level	Temperature
50Ω	dc-4 GHz	500 Vrms	-65 to +165°C
75Ω	dc-4 GHz	500 Vrms	-65 to +165°C

Mechanical

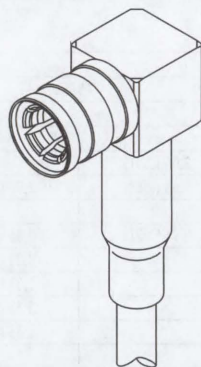
Nominal Impedance	Force to Engage - Axial Force	Force to Disengage - Axial Force	Durability	Center Contact Retention Axial Force	Cable Retention			
					Crimp		Non-Crimp	
					Cable OD	Minimum Axial Force	Cable OD	Minimal Axial Force
50Ω	62.2N (14 lb) max.	8.9N to 62.2N (2 to 14 lb)	500 cycles	17.8N (4 lb) min.	<.154 (3.93)	22N (5 lb)		177.8N (40 lb)
					.155 (3.94) to .188 (4.80)	44N (10 lb)		
					.189 (4.81) to .229 (5.82)	88.9N (20 lb)		
					.230 (5.83) to .249 (6.33)	133.3N (30 lb)		
					>.250 (6.34)	177.8N (40 lb)		
75Ω	62.2N (14 lb) max.	8.9N to 62.2N (2 to 14 lb)	500 cycles	17.8N (4 lb) min.	<.154 (3.93)	22N (5 lb)		177.8N (40 lb)
					.155 (3.94) to .188 (4.80)	44N (10 lb)		
					.189 (4.81) to .229 (5.82)	88.9N (20 lb)		
					.230 (5.83) to .249 (6.33)	133.3N (30 lb)		
					>.250 (6.34)	177.8N (40 lb)		

Electrical

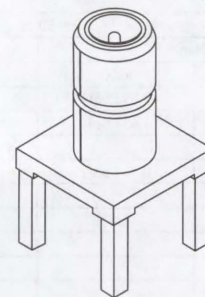
Nominal Impedance	Insulation Resistance	Dielectric Withstanding Voltage	Contact Resistance		Voltage Standing Wave Ratio
			Center Contact Initial	Outer Contact	
50Ω	1000 MΩ	1000 Vrms min.	6.0mΩ max.	4.0mΩ max.	1.30 + .001 fGHz per mated pair from DC to 4GHz
75Ω	1000 MΩ	1000 Vrms min.	6.0mΩ max.	3.0mΩ max.	1.10:1 per mated pair from dc to 1 GHz

Environmental

Nominal Impedance	Vibration: MIL-STD-202, Method 204	Thermal Shock: MIL-STD-202, Method 107	Corrosion (Salt Spray): MIL-STD-202, Method 101	Mechanical Shock: MIL-STD-202, Method 213	Moisture Resistance: MIL-STD-202, Method 106
50Ω	Test Condition B	Test Condition A	Test Condition B	Test Condition A	200MΩ
75Ω	Test Condition B	Test Condition A	Test Condition B	Test Condition A	200MΩ

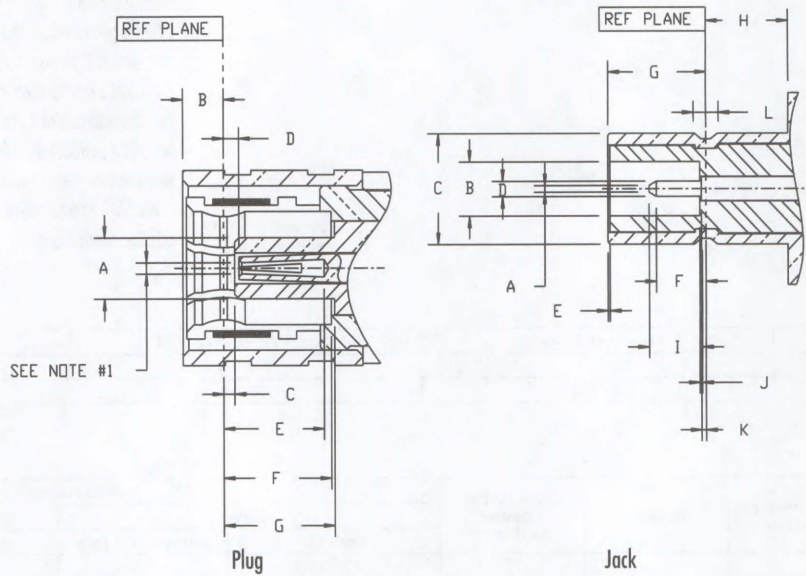


Right Angle Solder/Crimp Plug

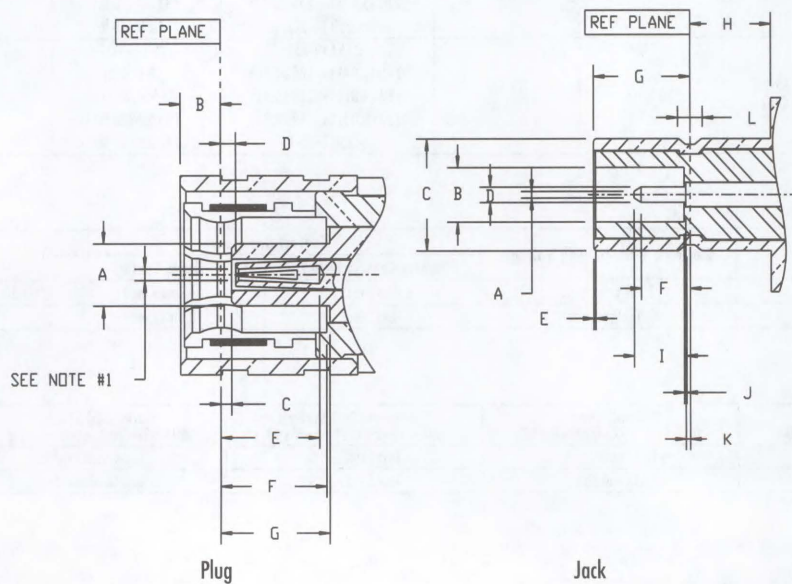


Vertical PCB Jack Receptacle

50Ω



75Ω



RF Coaxial Connectors

P

INTERFACE MATING DIMENSIONS

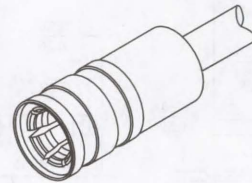
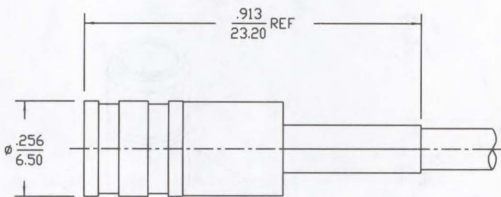
	Dimension							
	50 Ω				75Ω			
	Plug		Jack		Plug		Jack	
	min.	max.	min.	max.	min.	max.	min.	max.
A (dia)		2.06 (.081)		0.25 (.010)		2.06 (.081)		0.14 (.005)
B		1.63 (.064)	2.08 (.082)	2.16 (.085)		1.63 (.064)	2.08 (.082)	2.16 (.085)
C	0.18 (.007)			3.71 (.146)	0.18 (.007)			3.71 (.146)
D	0.18 (.007)	0.94 (.037)	0.48 (.019)	0.53 (.021)	0.18 (.007)	0.94 (.037)	0.36 (.014)	0.41 (.016)
E	2.97 (.117)		0.00 (.000)		2.97 (.117)		0.00 (.000)	
F	3.58 (.141)		1.32 (.052)		3.58 (.141)		1.32 (.052)	
G	3.58 (.141)		3.33 (.131)	3.58 (.141)	3.58 (.141)		3.33 (.131)	3.58 (.141)
H			1.65 (.065)				1.65 (.065)	
I				2.97 (.117)				2.97 (.117)
J				0.18 (.007)				0.18 (.007)
K				0.18 (.007)				0.18 (.007)
L			0.69 (.027)	0.94 (.037)			0.69 (.027)	0.94 (.037)

Note: ID to meet VSWR and contact resistance when mated with .508 ± .0254 (.020 ± .001) diameter pin (50Ω), .385 ± .0254 (.015 ± .001) diameter pin (75Ω)

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Gold
- Packaging: Individual
- Center contact termination: See table

**Plug
Straight
Solder/Crimp
Cable**

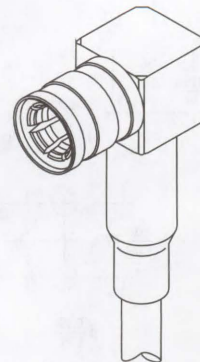
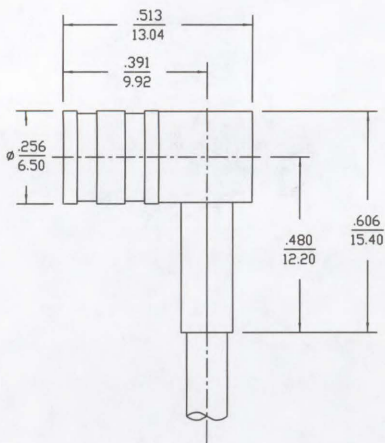


Order No.	Cable Group	Center Contact Termination	Impedance	Assembly Instructions
73100-0248	RG174, 179, 187, 188, 316	Solder	50Ω	AS-73597-0054
73100-0255	RG179	Solder or Crimp	75Ω	AS-73597-0071

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Gold
- Center contact solder termination
- Crimp braid termination
- Packaging: Individual

**Plug
Right Angle
Solder/Crimp
Cable**

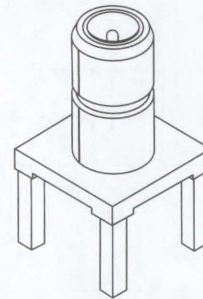
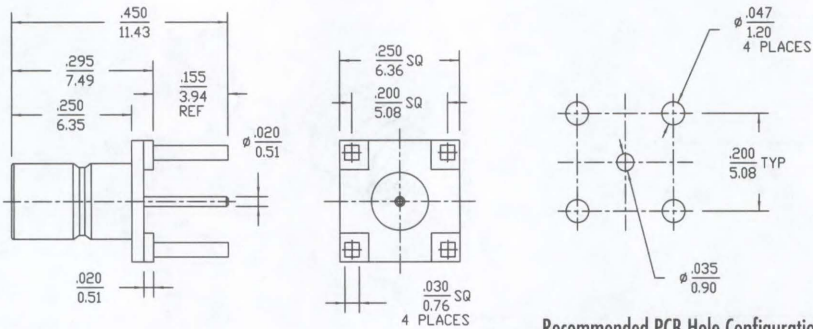


Order No.	Cable Group	Impedance	Assembly Instructions
73100-0257	RG174, 188, 316	50Ω	AS-73597-0063
73100-0256	RG179	75Ω	AS-73597-0047

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Gold
- Body: Brass
- PCB Standoffs
- Packaging: Tray

**Jack Receptacle
Vertical
PCB**



Recommended PCB Hole Configuration

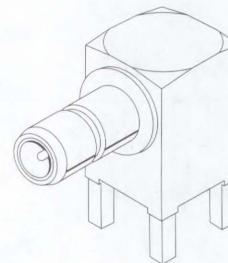
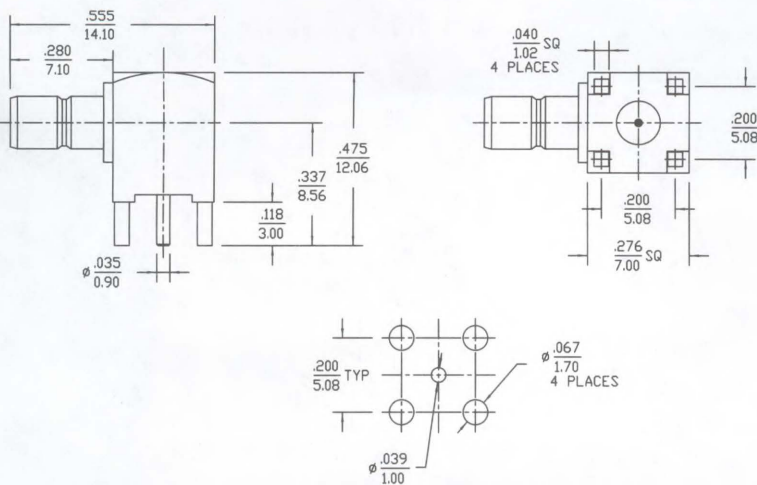
Order No.	Impedance
73100-0207	50Ω
73100-0157	75Ω

RF Coaxial Connectors

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Gold
- Body: Brass
- PCB Standoffs
- Packaging: Tray

**Jack Receptacle
Right Angle
PCB**



Recommended PCB Hole Configuration

Order No.	Impedance
73100-0103	50Ω
73100-0259	75Ω

SMA OVERVIEW

Features and Dimensions

- Subminiature
- Threaded coupling
- DC to 27 GHz

Molex SMA connectors are high performance subminiature connectors for microwave frequencies. These connectors are typically specified to operate up to 18GHz but will function mode free to 25GHz and some SMA connectors have been designed to operate to 27 GHz.

The screw-threaded coupling insures uniform contact of the outer conductors, which enables the SMA to minimize reflections and attenuation at higher frequencies while providing a high degree of mechanical strength and durability. In addition, when combined with the screw-threaded coupling, the SMA interface is designed to keep reactances to a minimum, which allows the SMA to be used beyond the frequencies associated with snap on subminiature connectors.

Typical applications for SMA connectors include microwave active and passive components, instrumentation, avionics, and other high-end radio electronics.

Engineering

	Nominal Impedance	Frequency Range	Voltage Rating - Sea Level	Temperature
Cabled	50Ω	dc-18 GHz	335 Vrms	-65 to +165°C
Non-Cabled	50Ω	dc-18 GHz	335 Vrms	-65 to +165°C

Mechanical

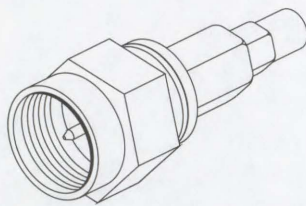
	Recommended Mating Torque	Force to Engage and Disengage - Radial	Coupling Nut Retention Force	Coupling Proof Torque	Mating Characteristics	Connector Durability	Center Contact Retention	Cable Retention
							Axial Force	Axial Force
Cabled	31N to 44.4N (7 to 10 in.-lb)	8.9N (2 in.-lb)	Plugs-266.6N (60 lb)	Plugs-1.7N-m (15 in.-lb)	See MIL-STD-348 Fig. 310-2 for Jacks Fig. 310-1 for Plugs	500 cycles	26.7N (6 lb)	133.3N (30 lb)
Non-Cabled	31N to 44.4N (7 to 10 in.-lb)	8.9N (2 in.-lb)	Plugs-266.6N (60 lb)	Plugs-1.7N-m (15 in.-lb)	See MIL-STD-348 Fig. 310-2 for Jacks Fig. 310-1 for Plugs	500 cycles	26.7N (6 lb)	N/A

Electrical

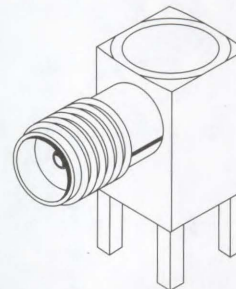
	Insulation Resistance	Dielectric Withstanding Voltage	RF High Potential Withstanding	Contact Resistance				Voltage Standing Wave Ratio	RF Leakage	RF Insertion loss - dB max.
				Center Contact Initial	Center Contact After Environment	Outer Contact	Outer Conductor to Body			
Cabled	5000 MΩ	750 Vrms	500 Vrms @ 5 MHz to 7.5 MHz	3.0mΩ	4.0mΩ	2.0mΩ	5mΩ	1.15 + .01fGHz	-60 dB min. 2 to 3 GHz	.06 $\sqrt{f(GHz)}$
Non-Cabled	5000 MΩ	750 Vrms	670 Vrms @ 5 MHz	3.0mΩ	4.0mΩ	2.0mΩ	N/A	1.04 + .01fGHz	-100 dBmin. 2 to 3 GHz	.03 $\sqrt{f(GHz)}$

Environmental

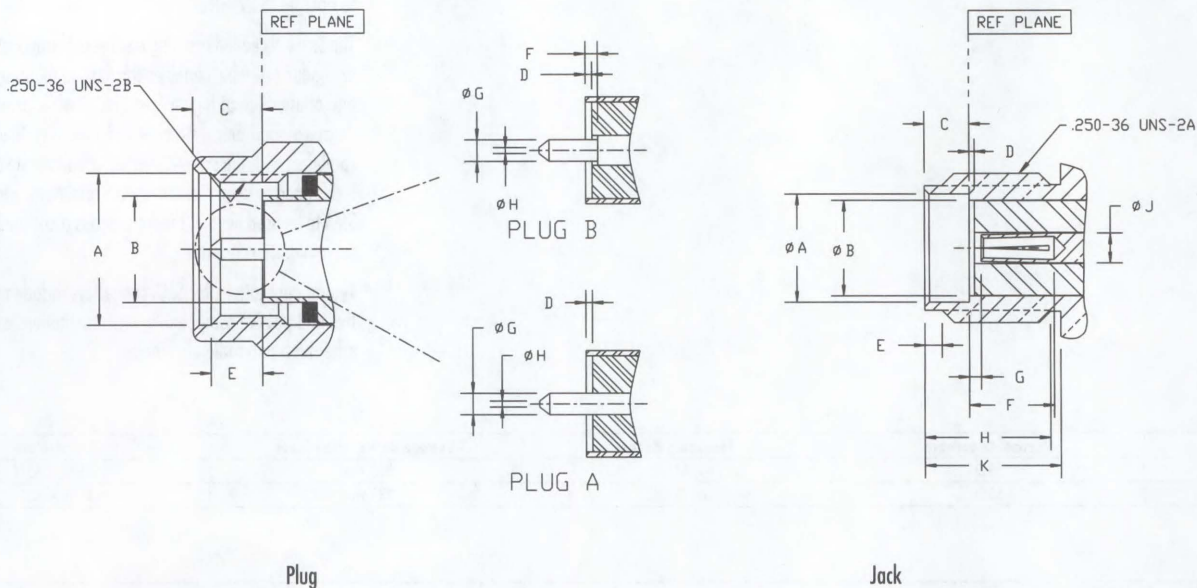
	Vibration: MIL-STD-202, Method 204	Shock: MIL-STD-202, Method 213	Thermal Shock - MIL-STD-202, Method 1071	Corrosion (Salt Spray) - MIL-STD-202, Method 101	Moisture Resistance - MIL-STD-202, Method 106 - 5 min. after removal	Corona Level - 70,000 Feet
Cabled	Test Condition D	Test Condition I	Test Condition B	Test Condition B	200 MΩ	250 Vrms
Non-Cabled	Test Condition D	Test Condition I	Test Condition B	Test Condition B	200 MΩ	250 Vrms



Straight Crimp/Crimp Plug



Right Angle PCB Jack Receptacle



INTERFACE MATING DIMENSIONS

	Dimension			
	Plug		Jack	
	min.	max.	min.	max.
A (dia.)	6.35 (.250)		5.28 (.208)	5.49 (.216)
B (dia.)		4.59 (.1808)	4.60 (.181)	
C		3.43 (.135)	1.91 (.075)	1.98 (.078)
D	0.00 (.000)	0.18 (.007)	0.00 (.000)	0.18 (.007)
E		2.54 (.100)	0.38 (.015)	1.14 (.045)
F	0.00 (.000)	0.25 (.010)	2.92 (.115)	
G (dia.)	0.90 (.0355)	0.94 (.037)	0.00 (.000)	0.25 (.010)
H (dia.)	0.00 (.000)	0.38 (0.015)	4.32 (.170)	
I			1.24 (.049)	1.30 (.051)
K			5.54 (.218)	

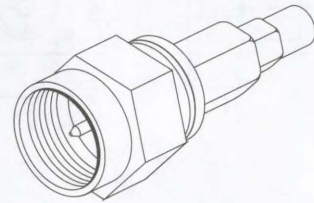
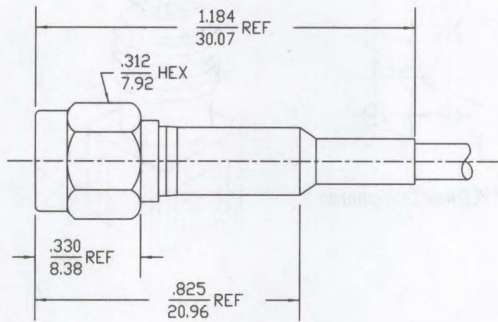
RF Coaxial Connectors

P

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Stainless Steel, passivated
- Center contact crimp or solder termination
- Crimp braid termination
- Packaging: Individual

**Plug
Straight
Crimp/Crimp
Cable**

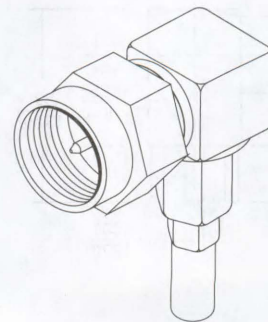
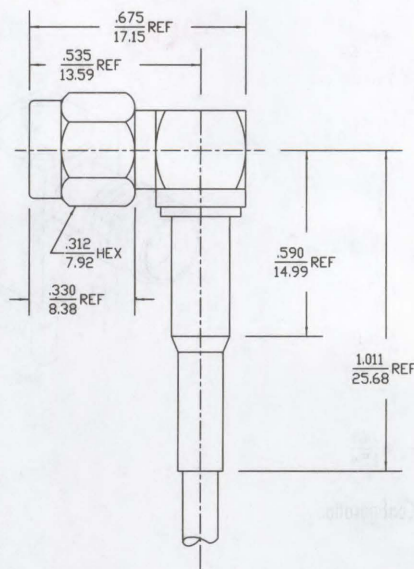


Order No.	Cable Group	Assembly Instructions
73251-0151	RG174, 179, 187, 188, 316	ES-89675-1580
73251-0131	RG58, 141, 303	ES-89675-1570

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Stainless Steel, passivated
- Center contact solder termination
- Crimp braid termination
- Packaging: Individual

**Plug
Right Angle
Solder/Crimp
Cable**

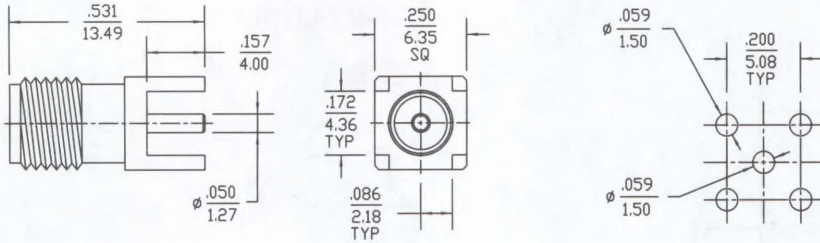


Order No.	Cable Group	Assembly Instructions
73251-0211	RG174, 179, 187, 188, 316	ES-89675-1600
73251-0191	RG58, 141, 303	ES-89675-1590

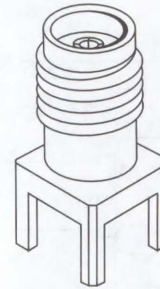
CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Gold
- Body: Brass
- Packaging: Tray

**Jack Receptacle
Vertical
PCB**



Recommended PCB Hole Configuration

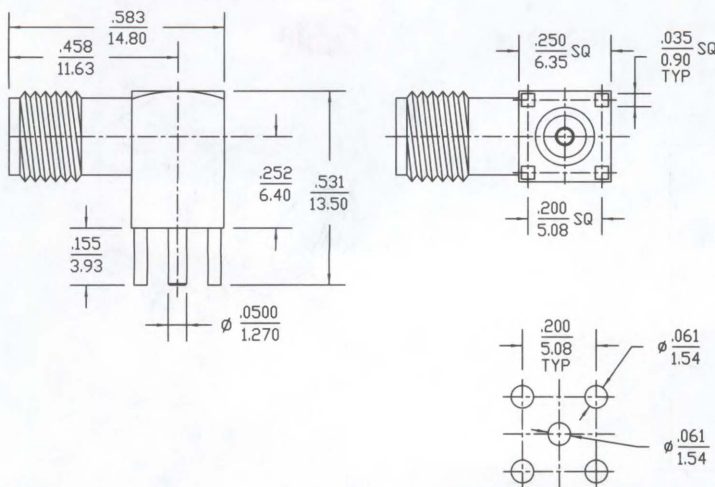


Order No.
73391-0060

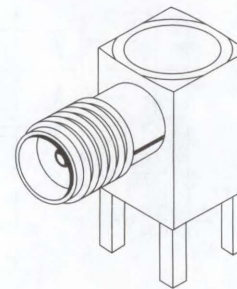
CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Gold or Nickel
- Body: Brass
- Packaging: Tray

**Jack Receptacle
Right Angle
PCB**



Recommended PCB Hole Configuration

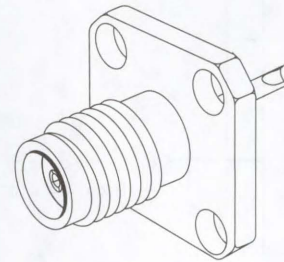
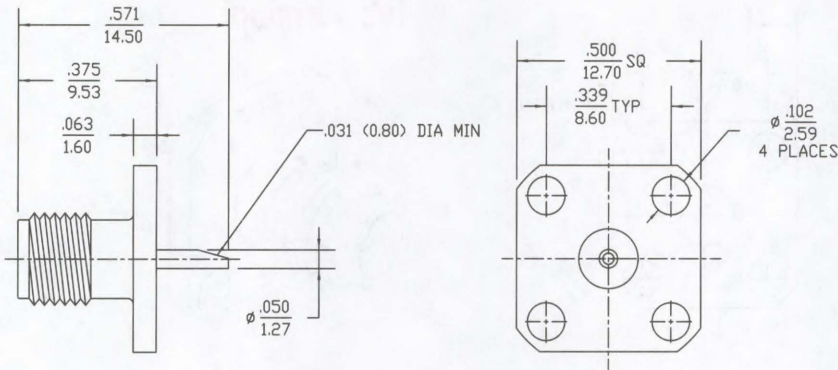


Order No.	Finish
73100-0114	Gold
73100-0115	Nickel

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Gold
- Body: Brass

**Jack Receptacle
4 Hole Flange Mount
Solder Pot**

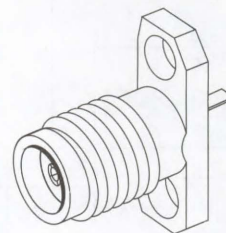
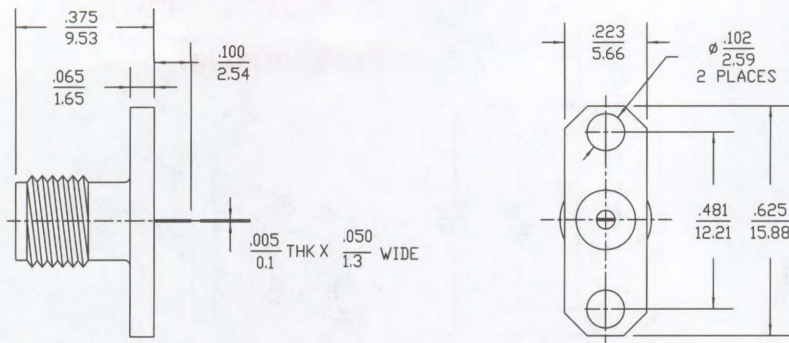


Order No.
73391-0040

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Stainless Steel, passivated

**Jack Receptacle
2 Hole Flange Mount
Tab Terminal**

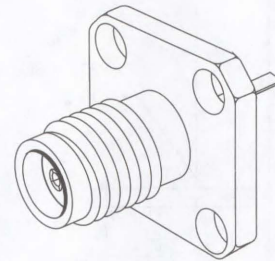
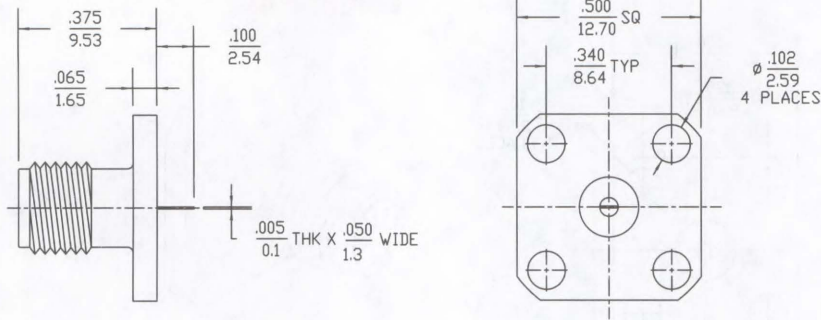


Order No.
73251-0280

CATALOG DRAWING (FOR REFERENCE ONLY)

■ Body: Stainless Steel, passivated

**Jack Receptacle
4 Hole Flange Mount
Tab Terminal**



Order No.
73251-0270

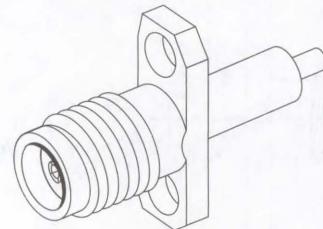
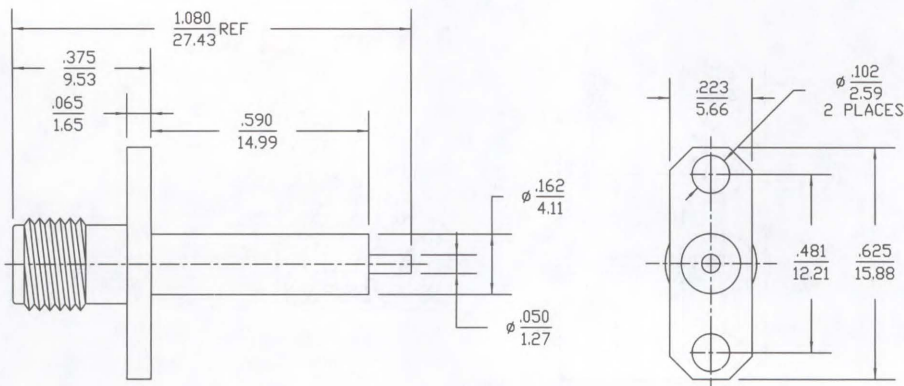
RF Coaxial Connectors

P

CATALOG DRAWING (FOR REFERENCE ONLY)

■ Body: Stainless Steel, passivated

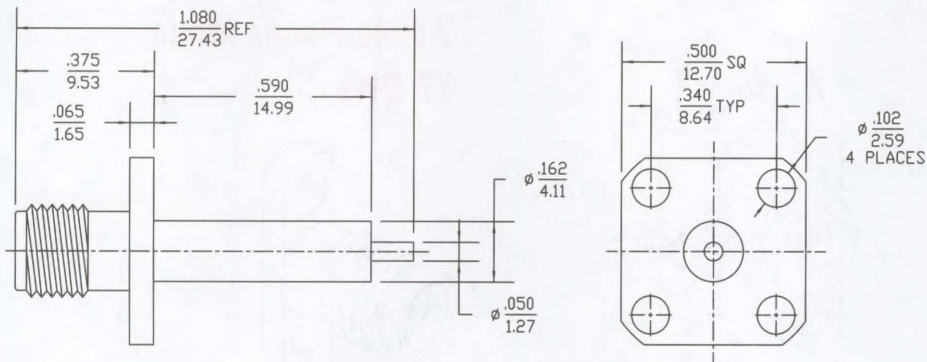
**Jack Receptacle
2 Hole Flange Mount
Extended Dielectric
Post Terminal**



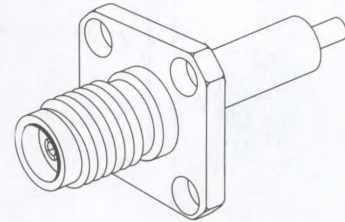
Order No.
73251-0420

CATALOG DRAWING (FOR REFERENCE ONLY)

■ Body: Stainless Steel, passivated



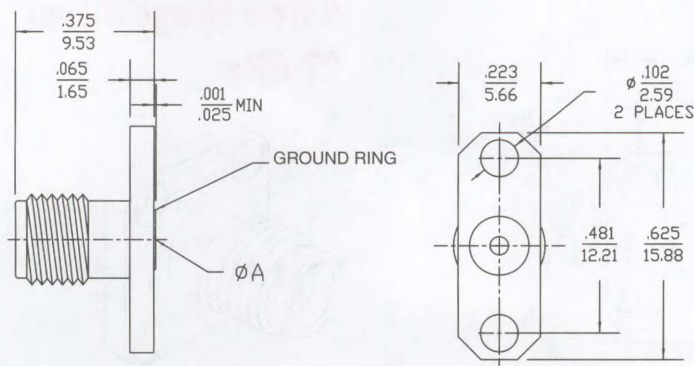
**Jack Receptacle
4 Hole Flange Mount
Extended Dielectric
Post Terminal**



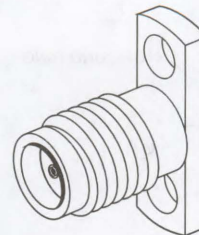
Order No.
73251-0410

CATALOG DRAWING (FOR REFERENCE ONLY)

■ Body: Stainless Steel, passivated



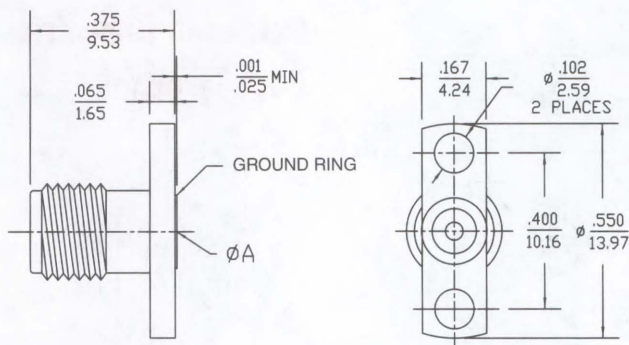
**Jack Receptacle
Field Replaceable
2 Hole Flange Mount
27 GHz**



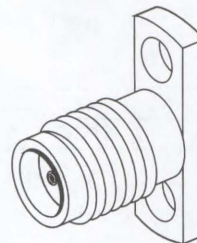
Order No.	Accepts Pin Diameter
	A
73251-0200	.305 (0.012)
73251-0940	.381 (0.015)
73251-0920	.457 (0.018)
73251-0180	.508 (0.020)

CATALOG DRAWING (FOR REFERENCE ONLY)

■ Body: Stainless Steel, passivated



**Jack Receptacle
Field Replaceable
2 Hole Flange Mount
27 GHz**

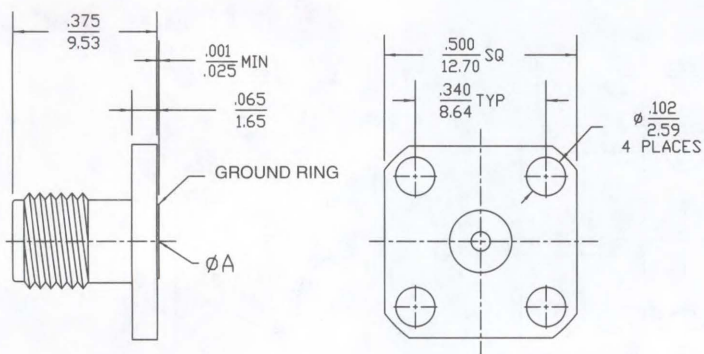


Order No.	Accepts Pin Diameter
	A
73251-1020	.305 (0.012)
73251-1000	.381 (0.015)
73251-0980	.457 (0.018)
73251-0960	.508 (0.020)

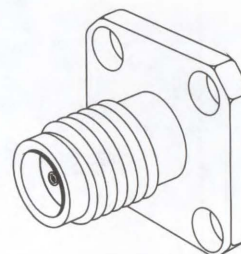
RF Coaxial Connectors

CATALOG DRAWING (FOR REFERENCE ONLY)

■ Body: Stainless Steel, passivated



**Jack Receptacle
Field Replaceable
4 Hole Flange Mount
27 GHz**

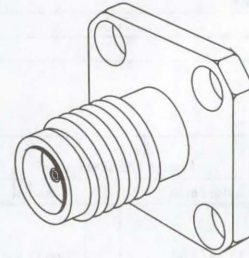
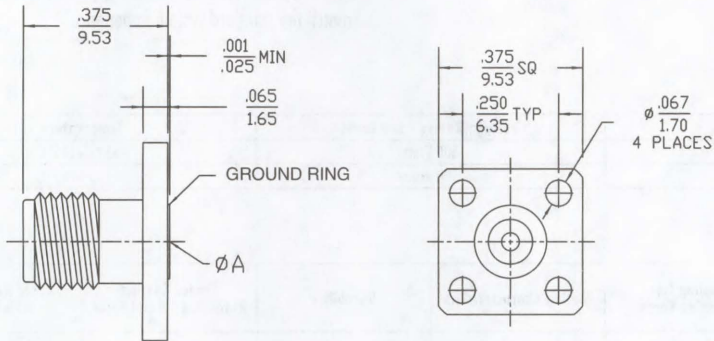


Order No.	Accepts Pin Diameter
	A
73251-0160	.305 (0.012)
73251-0820	.381 (0.015)
73251-0800	.457 (0.018)
73251-0140	.508 (0.020)

CATALOG DRAWING (FOR REFERENCE ONLY)

■ Body: Stainless Steel, passivated

**Jack Receptacle
Field Replaceable
4 Hole Flange Mount
27 GHz**



Order No.	Accepts Pin Diameter
	A
73251-0900	.305 (0.012)
73251-0880	.381 (0.015)
73251-0860	.457 (0.018)
73251-0840	.508 (0.020)

BNC OVERVIEW

Features and Benefits

- Miniature
- Bayonet Lock Coupling
- DC to 4 GHz
- 50 and 75Ω

molex® BNC Connectors

Molex BNC connectors are small, lightweight, weatherproof miniature connectors that are the most popular connector series used in a variety of RF applications. The two stud bayonet coupling system of the BNC yields an easy-to-use, quick connecting/disconnecting device that accounts for the BNC's popularity. These connectors are manufactured to MIL-PRF-39012 requirements and are typically used in applications operating up to 4 GHz. BNC connectors are used in data networking as well as video, audio and test equipment application. Video applications such as security systems use 75Ω versions to match the standard system impedance.

Engineering

Nominal Impedance	Frequency Range	Voltage Rating - Sea Level	Temperature
50Ω	dc-4 GHz	500 Vrms	-65 to +165°C
75Ω	dc-4 GHz	500 Vrms	-65 to +165°C

Mechanical

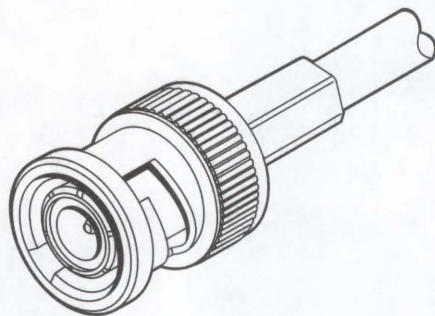
Nominal Impedance	Force to Engage and Disengage		Coupling Nut Retention Force	Mating Characteristics	Durability	Center Contact Retention - Axial Force	Cable Retention - Axial Force
	Axial Force	Radial					
50Ω	13.3N (3 lb)	28N-cm (2.5 in.-lb)	Plugs - 444N (100 lb)	SEE ES-73599-0000	500 cycles	26.7N (6 lb)	RG 174, 188, 316 - 44.4N (10 lb) RG 58, 141, 303 - 88.9N (20 lb) RG 59, 62 - 133.3N (30 lb)
75Ω	13.3N (3 lb)	28N-cm (2.5 in.-lb)	Plugs - 444N (100 lb)	SEE ES-73599-0000	500 cycles	26.7N (6 lb)	RG 174, 188, 316 - 44.4N (10 lb) RG 58, 141, 303 - 88.9N (20 lb) RG 59, 62 - 133.3N (30 lb)

Electrical

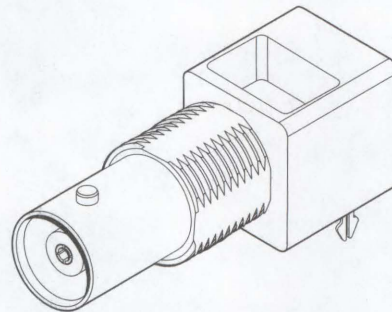
Nominal Impedance	Insulation Resistance	Dielectric Withstanding Voltage	Contact Resistance			Voltage Standing Wave Ratio	RF Leakage	RF Insertion Loss
			Center Contact Initial	Center Contact After Environment	Outer Contact			
50Ω	5000 MΩ	1500 Vrms min.	2.0mΩ	2.5mΩ	0.2mΩ	1.30:1 max.	-55 dB at 2.0 to 3.0 GHz	0.2 dB max.
75Ω	5000 MΩ	1500 Vrms min.	1.5mΩ	2.0mΩ	0.2mΩ	1.30:1 max.	-55 dB at 2.0 to 3.0 GHz	0.2 dB max.

Environmental

Nominal Impedance	Vibration: MIL-STD-202, Method 204	Shock: MIL-STD-202, Method 213	Thermal Shock: MIL-STD-202, Method 1071	Corrosion (Salt Spray): MIL-STD-202, Method 101	Moisture Resistance MIL-STD-202, Method 106 5 min. after removal	Corona Level - 70,000 Feet
50Ω	Test Condition B	Test Condition G	Test Condition B	Test Condition B	200 MΩ	375 Vrms
75Ω	Test Condition B	Test Condition G	Test Condition B	Test Condition B	200 MΩ	N/A

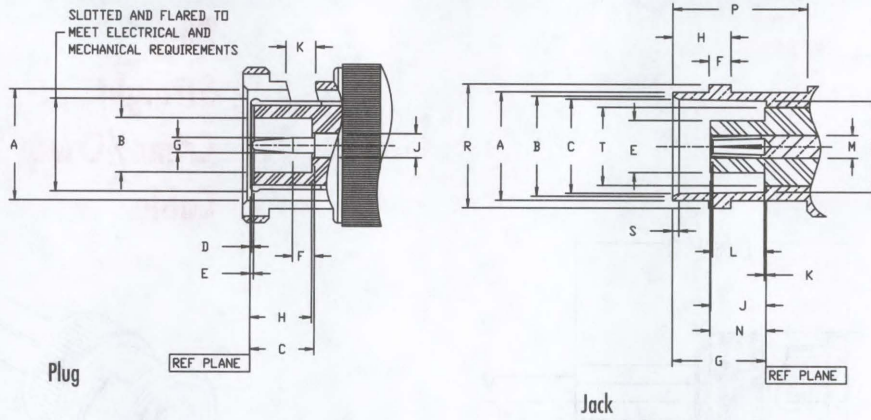


Straight Crimp/Crimp Plug

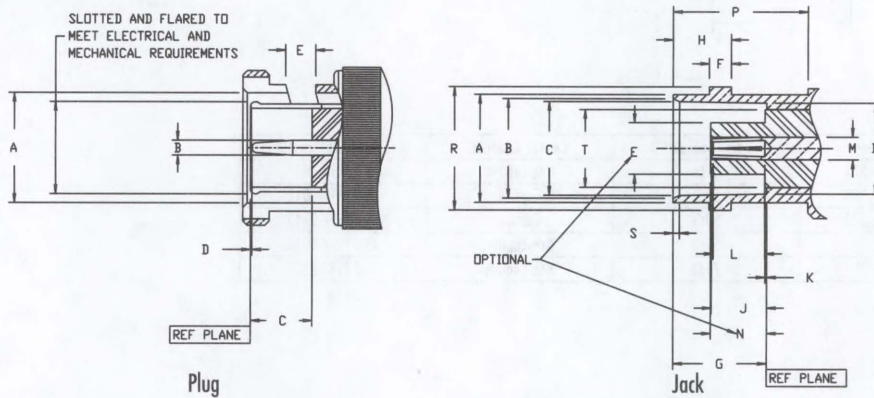


Right Angle PCB Jack Receptacle

50Ω



75Ω

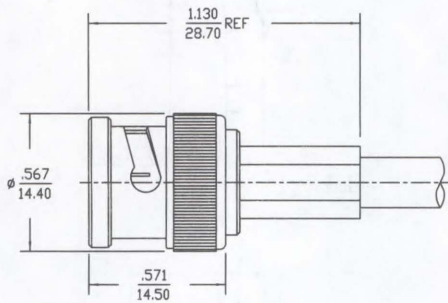


INTERFACE MATING DIMENSIONS

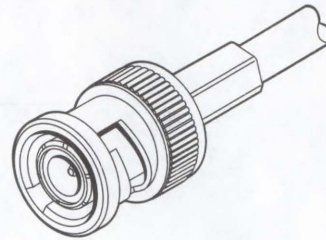
	Dimension							
	50Ω				75Ω			
	Plug		Jack		Plug		Jack	
	min.	max.	min.	max.	min.	max.	min.	max.
A (dia.)	9.78 (.385)	9.91 (.390)	9.60 (.378)	9.70 (.382)	9.78 (.385)	9.91 (.390)	9.60 (.378)	9.70 (.382)
B	4.86 (.190)		8.79 (.346)	9.04 (.356)	1.32 (.052)	1.37 (.054)	8.79 (.346)	9.04 (.356)
C	5.33 (.210)	5.84 (.230)	8.31 (.327)	8.46 (.333)	5.41 (.213)	5.66 (.223)	8.31 (.327)	8.46 (.333)
D	0.15 (.006)		8.10 (.319)	8.15 (.321)	0.15 (.006)		8.10 (.319)	8.15 (.321)
E	0.08 (.003)			4.72 (.186)	2.31 (.091)	2.46 (.097)		4.72 (.186)
F	1.98 (.078)		1.91 (.075)	2.06 (.081)			1.91 (.075)	2.06 (.081)
G	1.32 (.052)	1.37 (.054)	8.31 (.327)	8.51 (.335)			8.31 (.327)	8.51 (.335)
H	5.28 (.208)	5.79 (.228)	5.18 (.204)	5.28 (.208)			5.18 (.204)	5.28 (.208)
J	2.06 (.081)	2.21 (.087)	4.72 (.186)	5.23 (.206)			4.72 (.186)	5.23 (.206)
K	2.31 (.091)	2.46 (.097)		0.15 (.006)				0.15 (.006)
L			4.95 (.195)				4.95 (.195)	
M			2.06 (.081)	2.21 (.087)			2.06 (.081)	2.21 (.087)
N			4.78 (.188)	5.28 (.208)			4.78 (.188)	5.28 (.208)
P			10.52 (.414)				10.52 (.414)	
R			10.97 (.432)	11.07 (.436)			10.97 (.432)	11.07 (.436)
S			0.38 (.015)	0.76 (.030)			0.38 (.015)	0.76 (.030)
T				6.50 (.256)				6.50 (.256)

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Nickel
- Center contact crimp or solder termination
- Crimp braid termination
- Packaging: Individual



**Plug
Straight
Crimp/Crimp
Cable**

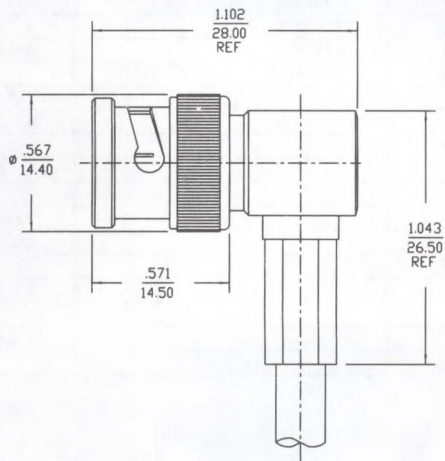


Order No.	Cable Group	Impedance	Center Contact	Assembly Instructions
73104-5003	RG 58, 141, 303	50Ω	Non-Captive	AS-73597-0032
73174-0083	RG 58, 141, 303	50Ω	Captive	AS-73597-0042
73174-0093	RG 58, 141, 303	50Ω	Captive	AS-73597-0042
73105-5003	RG 59, 62, 71	50Ω	Non-Captive	AS-73597-0032
73174-0113	RG59, 62, 71	75Ω	Non-Captive	AS-73597-0032

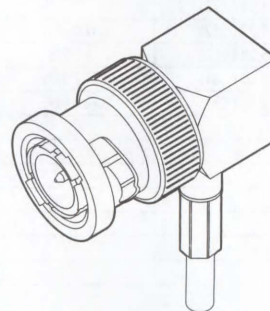
RF Coaxial Connectors

CATALOG DRAWING (FOR REFERENCE ONLY)

- Overall Plating: Nickel
- Center contact solder termination
- Crimp braid termination
- Packaging: Individual



**Plug
Right Angle
Solder/Crimp
Cable**

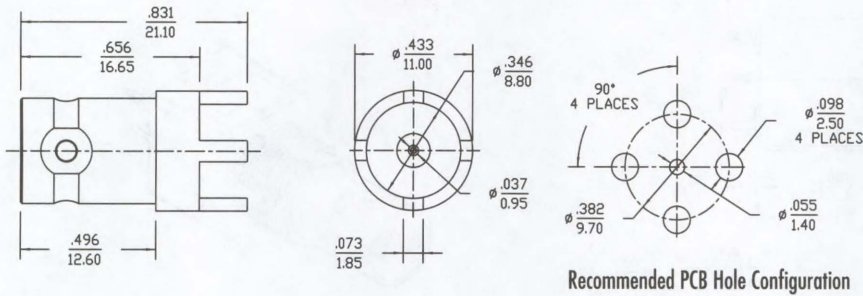


Order No.	Cable Group	Impedance	Assembly Instructions
73100-0015	RG58, 141, 303	50Ω	AS-73597-0010
73100-0016	RG 59, 62, 71	75Ω	AS-73597-0010

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Brass
- Overall Plating: Nickel
- Packaging: Bag

**Jack Receptacle
Vertical
PCB**

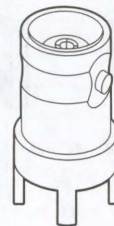
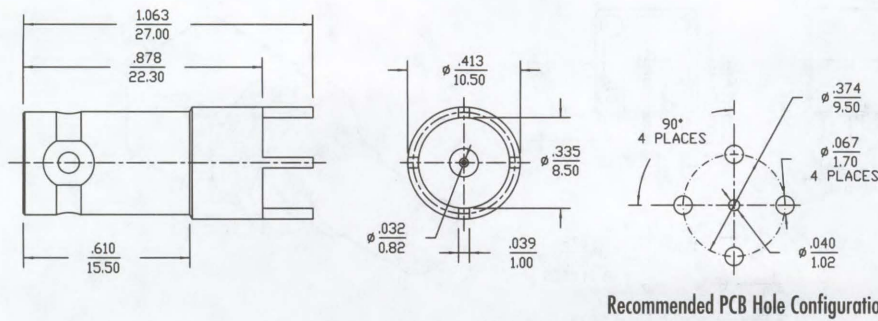


Order No. 73100-0153

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Brass
- Overall Plating: Nickel
- Packaging: Bag

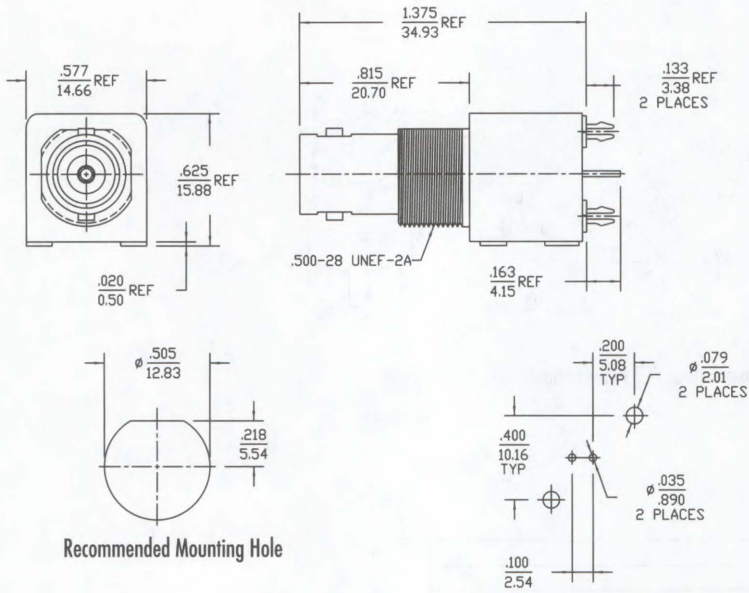
**Jack Receptacle
Vertical
PCB**



Order No. 73100-0133

CATALOG DRAWING (FOR REFERENCE ONLY)

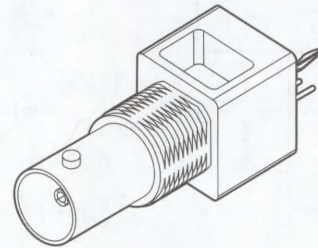
- Body/Housing: Zinc
- Overall Plating: Nickel
- Packaging: Tray



Recommended Mounting Hole

Recommended PCB Hole Configuration

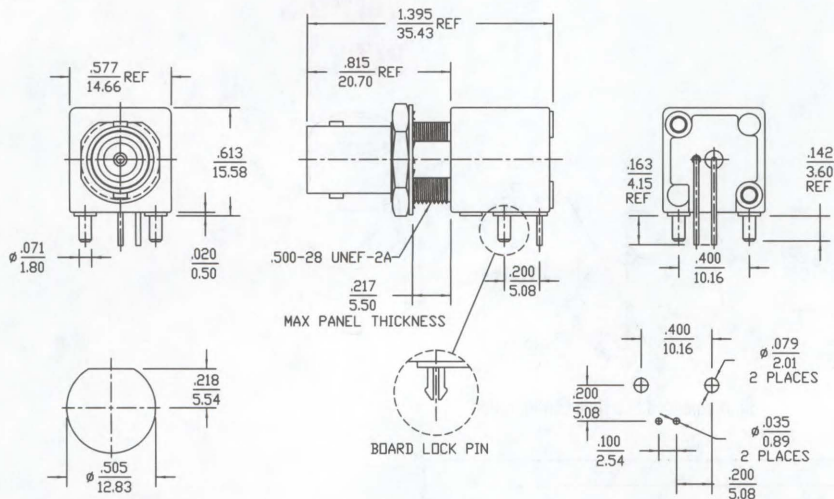
**Jack Receptacle
Vertical
With Board Lock Pins
PCB**



Order No.	Impedance
73101-0030	75Ω

CATALOG DRAWING (FOR REFERENCE ONLY)

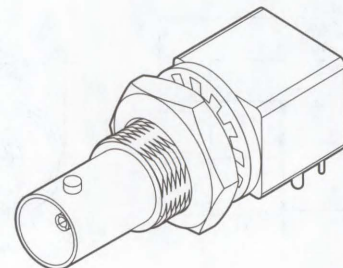
- Body/Housing: Zinc
- Overall Plating: Nickel



Recommended Mounting Hole

Recommended PCB Hole Configuration

**Jack Receptacle
Right Angle
PCB**



Order No.	Impedance
73138-5033*	50Ω
73100-0080	75Ω
73101-0040	75Ω

*Includes board lock pins

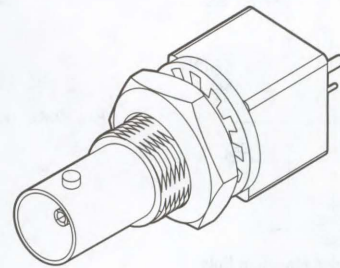
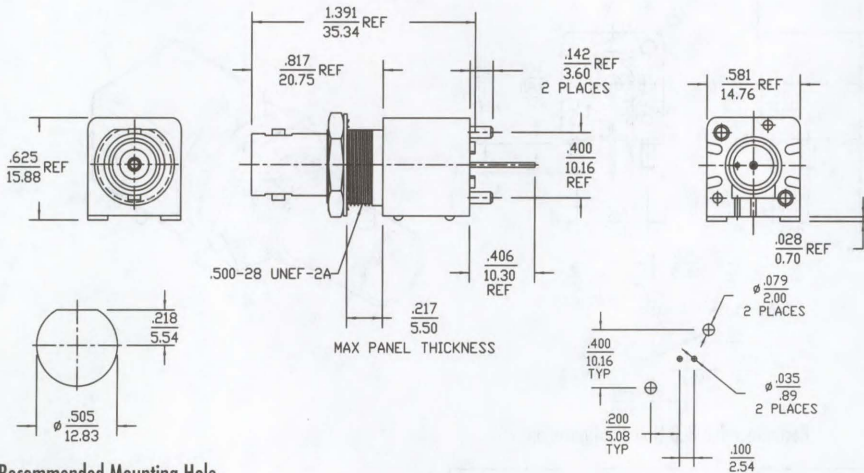
RF Coaxial Connectors

P

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Zinc
- Housing: Valox
- Overall Plating: Nickel

**Jack Receptacle
Vertical
Panel Isolated
PCB**



Recommended Mounting Hole

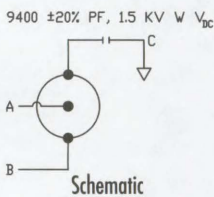
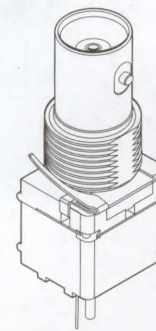
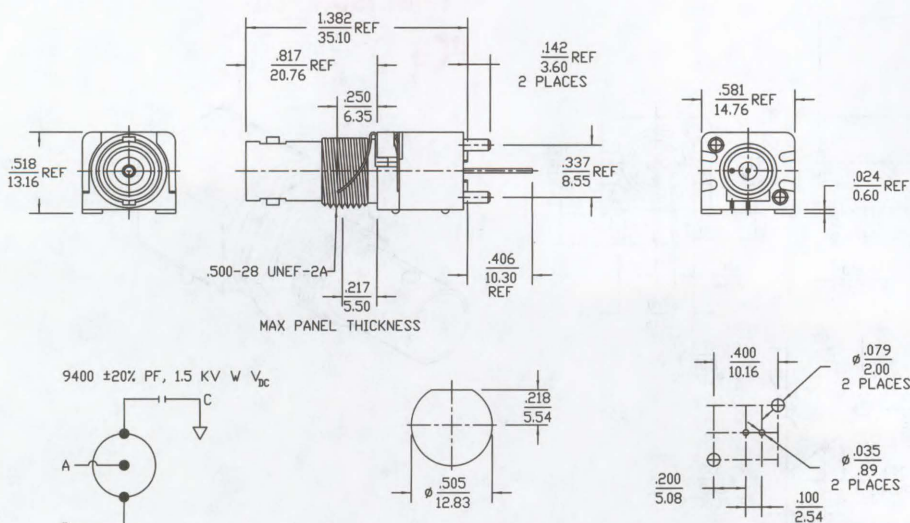
Recommended PCB Hole Configuration

Order No.	Housing Color	Impedance
73131-5003	Black	50Ω
73131-5013	White	50Ω
73131-7003	Black	75Ω

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Zinc
- Housing: Valox
- Overall Plating: Nickel

**Jack Receptacle
Vertical
Panel Isolated
Filtered
PCB**



Schematic

Recommended Mounting Hole

Recommended PCB Hole Configuration

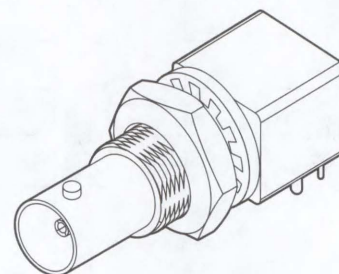
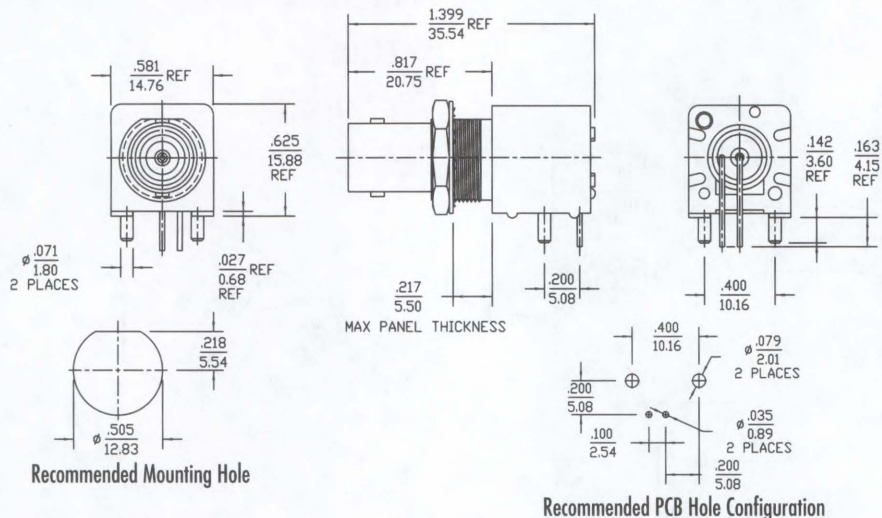
Order No.	Housing Color	Impedance
73101-0071	Black	75Ω
73171-0440*	Black	50Ω

* Hardware included

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Zinc
- Housing: Valox
- Overall Plating: Nickel
- Packaging: Tray

**Jack Receptacle
Right Angle
Panel Isolated
PCB**



Order No.	Housing Color	Impedance
73138-5003	Black	50Ω
73138-5013	White	50Ω
73100-0070	Black	75Ω
73100-0071	White	75Ω

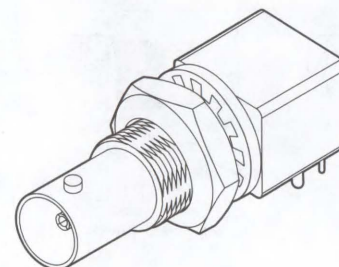
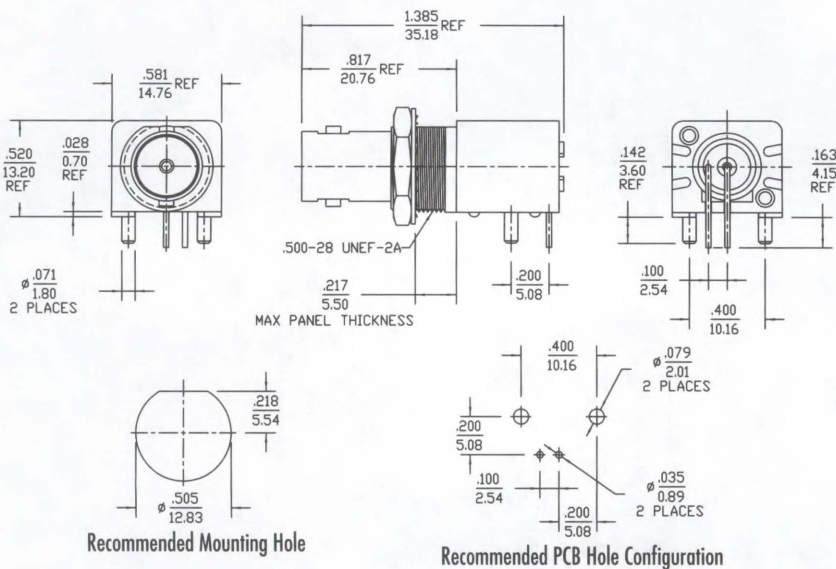
CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Zinc
- Housing: Valox
- Overall Plating: Nickel
- Packaging: Tray

**Jack Receptacle
Right Angle
Panel Isolated
PCB**

RF Coaxial Connectors

P

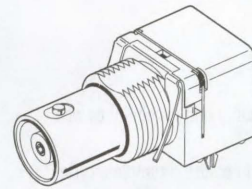
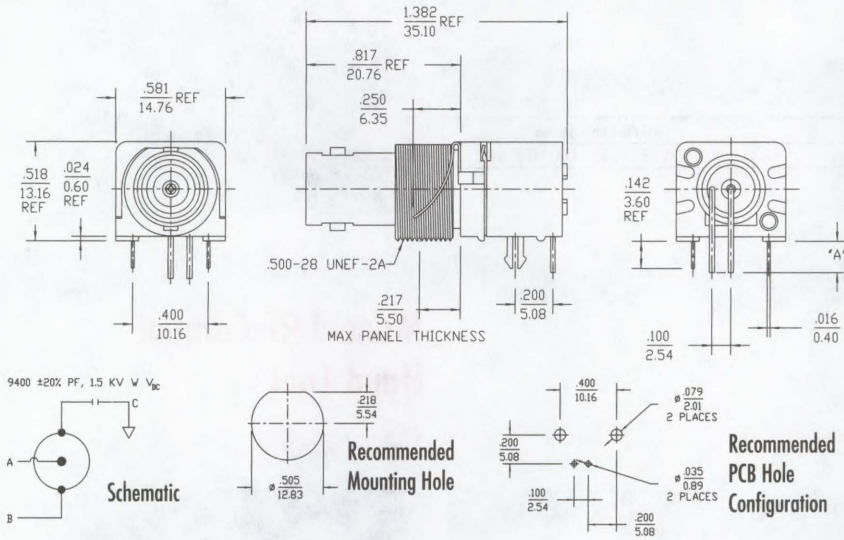


Order No.	Housing Color	Impedance
73100-0131	White	50Ω
73100-0167	Black	50Ω
73137-5003	Black	50Ω
73100-0067	Black	75Ω
73100-0069	White	75Ω

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body: Zinc
- Housing: Valox
- Overall Plating: Nickel
- Packaging: Individual

**Jack Receptacle
Right Angle
Filtered
Panel Isolated
With Board Lock Pins
PCB**



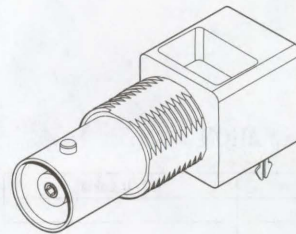
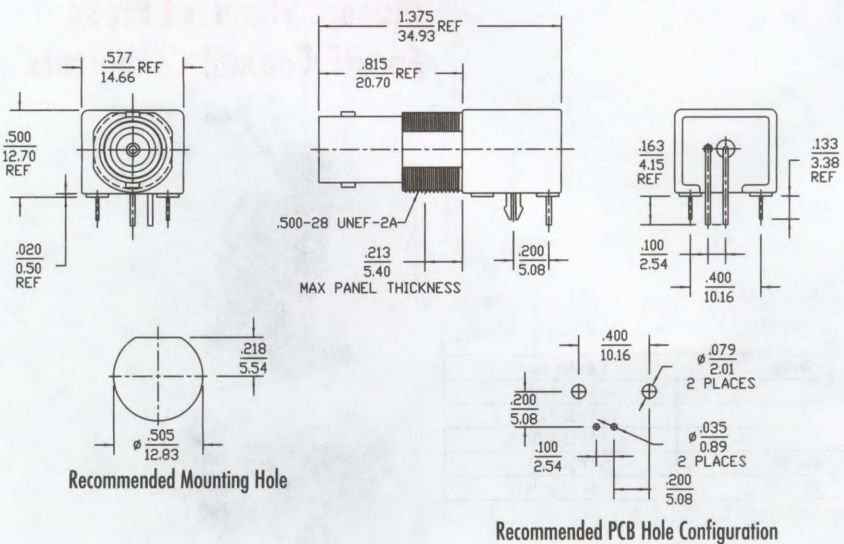
Order No.	Housing Color	Impedance	Dimensions
			A
73100-0090	Black	50Ω	4.15 (.163)
73100-0162*	Black	50Ω	4.15 (.163)
73100-0134	Black	50Ω	3.56 (.140)
73100-0223*	Black	50Ω	3.56 (.140)
73100-0166†	Neutral	50Ω	4.15 (.163)
73101-0070	Black	75Ω	4.15 (.163)

*Hardware included
† High temperature

CATALOG DRAWING (FOR REFERENCE ONLY)

- Body/Housing: Zinc
- Overall Plating: Nickel
- Packaging: Tray

**Jack Receptacle
Low Profile
Right Angle
With Board Lock Pins
PCB**

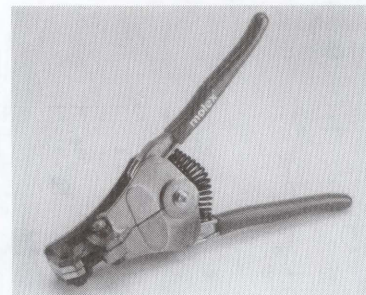


Order No.	Impedance
73101-0120	75Ω

FEATURES

- Precision hardened steel blades for long use
- Strips wire clean, up to 7/8"
- Jaws automatically stay open for removal of wire

Manual RF Coaxial Cable Stripping Tool



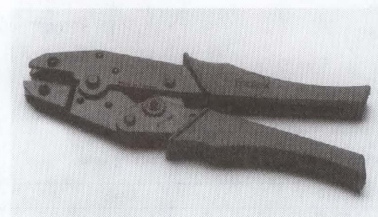
ORDERING INFORMATION

Description	Order No.	RG/U Cable Series
RF Cable Stripping Tool	42960-5500	55, 58, 59, 62, 141A, 142B

FEATURES

- Molex crimp tools offer quality and durability as well as reliability
- Each tool is fully ratcheted to assure a complete cycle for every crimp
- Tools are only required for crimp version connectors

Manual RF Coaxial Hand Tool



ORDERING INFORMATION

RG/U Cable	Series	Order No.	
		Hand Tool	Dies
55, 58, 141A, 142B	BNC, TNC	11-31-6379	11-31-9025
59, 62	BNC, TNC	11-31-6379	11-31-9026

ORDERING INFORMATION

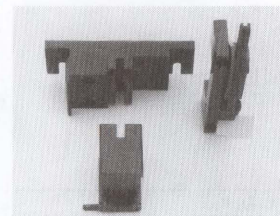
Preferred Version in Europe—Not Available in the US

Description	Order No.		Connector Series	Ferrule Part No.	Ferrule Size (OD)
	Complete Tool	Dies Only			
Hand Tool	69008-1030	69008-1032	RG58C/U, 59B/U	RF Connector	
Hand Tool	69008-1031	69008-1033	RG174A/U, Twinax	RF Connector	
Stripper	69008-1028	69008-1029	Cable	RF Connector	

FEATURES

- Full cycle ratchet on manual press
- Employs same crimp dies as hand tools (not included)
- Complete tool requires press, fixture and a die
- Hand tools and die must be ordered separately

Manual Standard Press For RF Coaxial Connectors



RF Tool Kit

ORDERING INFORMATION

Description	RG/U Cable	Series	Order No.
Manual Press			11-31-6356
Die Holder Fixture			11-31-7559
Manual Standard Press and Fixture			11-21-9507
Press Die	55, 58, 141A, 142B	BNC, TNC	11-31-9025
Press Die	59, 62	BNC, TNC	11-31-9026

RF Coaxial Connectors

P