

Product Searches

- [7/16](#)
- [1.0/2.3](#)
- [1.6/5.6](#)
- [AFI](#)
- [AMC](#)
- [BNC / RP-BNC](#)
- [C](#)
- [FAKRA SMB](#)
- [FME](#)
- [HN](#)
- [MCX](#)
- [Mini BNC](#)
- [Mini-UHF](#)
- [Mini 75 Ohm SMB](#)
- [MMCX](#)
- [Precision \(APC\)](#)
- [QMA](#)
- [QWS](#)
- [SC](#)
- [SMA / RP-SMA](#)
- [SMB](#)
- [SMC](#)
- [SMP](#)
- [SSMB](#)
- [TNC / RP-TNC](#)
- [Triax](#)
- [Twin BNC](#)
- [Twinax](#)
- [Type F](#)
- [Type G](#)
- [Type N](#)
- [UHF](#)
- -----
- [Adapters](#)
- [Cable Assemblies](#)
- [Tools](#)
- [Accessories](#)
- -----
- [Product Search](#)
- -----
- [Inventory Search](#)

product details

← back



Please note: Images are for reference only

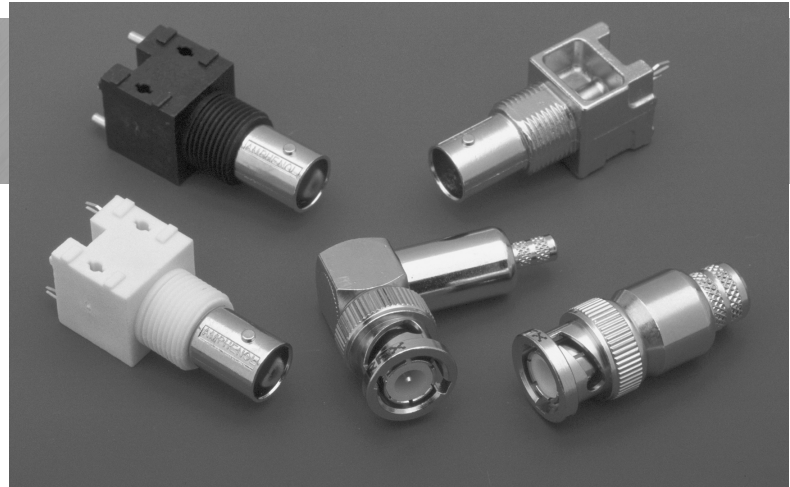
Amphenol Part Number:	031-5
Product Series:	BNC / RP-BNC
Product Type:	Connectors » Cable
Application:	Clamp
Body Plating:	Nickel
Body Termination:	Clamp
Cable Group:	C1
Cable Type:	RG-142 , RG-400
Connector Body Style:	Straight
Contact Plating:	Gold
Contact Termination:	Solder
Gender:	Jack
Grade:	Industrial
Impedance:	50 Ohm
RoHS Compliant:	Yes

Description

Amphenol 50 ohm BNC connectors are miniature, lightweight units designed to operate up to 11 GHz and typically yield low reflection through 4 GHz. Designed to accommodate a large variety of RG and industry standard cables, BNC connectors are available in crimp-crimp, clamp-solder, SURETWIST®, and field serviceable termination styles. A full line of printed circuit board receptacles, bulkhead receptacles, resistor terminations, and other accessories complement the product offering.

Features/Benefits

Amphenol manufactures a full line of BNC connectors to meet all users' needs. Parts which are listed with the appropriate M39012 number in the catalog are **Military Grade** connectors produced in accordance with and actively qualified to the military specification MIL-C-39012. Connectors not listed with the M39012 number constitute the **Industrial Grade** product offering. These connectors provide comparable performance and generally feature nickel plated brass bodies, Teflon insulators, and either gold or silver plated center contacts. Amphenol's **Commercial Grade** connector offering carries the part number designation "RFX" for easy recognition. These low cost connectors typically utilize diecast and molded components. While



performance will not be equal to the Industrial or Military grade products, these connectors are ideal for use on a variety of commercial applications.

Amphenol's 50 ohm BNC connectors (where indicated) are recognized under the Component Program of Underwriter's Laboratories, Inc. They are ideal for use with medical equipment and test instrumentation where safety cannot be compromised.

Applications

- Computers/LANs
- Test and Measurement
- Medical Equipment
- Telecommunications
- Wireless/Networks

50 ohm

BNC 50 ohm Connectors	106
Plugs and Jacks	108-113
Adapters	119
PCB Connectors	120-121

ELECTRICAL

Impedance	50 ohms nominal ■
Frequency range	0-4 GHz w/low reflection
Voltage rating	500 volts peak
Dielectric withstanding voltage	1,500 volts rms.
VSWR	M39012 straight connectors: 1.3 max. 0-4 GHz M39012 right angle: 1.35 max. 0-4 GHz
Other (MIL-C-39012 cable connectors)	Contact resistance: center contact 1.5 milliohm outer contact 0.2 milliohm Braid to body 0.1 milliohm RF leakage: - 55 dB minimum at 3 GHz Insertion loss: 0.2 dB maximum at 3 GHz Insulation resistance: 5000 megohms (min.)

MECHANICAL

Mating	2-stud bayonet coupling per M39012
Cable affixment (braid or jacket)	All crimps: hex braid crimp. Clamps: screw-thread nut and braid clamp.
Cable affixment (center conductor)	Crimps: crimp or solder All others: solder only
Captivated contact	All crimps Others: where specified.
Cable retention	Crimps: 20-100 lbs. All others: 30-70 lbs.

MATERIAL

Center contacts	Male: brass Female: Beryllium copper or phosphor bronze. Silver or gold plated
Other metal parts	Brass, Nickel finish except M39012 silver.
Insulators	TFE; copolymer of styrene, glass-TFE (hermetically sealed)
Clamp gaskets	Synthetic rubber, Silicone rubber
Crimp ferrule	Copper / Brass

ENVIRONMENTAL

Temperature range	TFE insulators: - 65°C to + 165°C Copolymer of Styrene: - 55°C to + 85°C
Weatherproof	Clamps with clamp gaskets. Crimps with heat-shrink tubing.
Hermetic seals	Pass helium leak test of 2 X 10 ⁻⁸ cc/sec
Shock	MIL-Std. 202 method 202
Vibration	MIL-Std. 202 method 204 (test cond. D)
Moisture resistance	MIL-Std. 202 method 106
Corrosion	MIL-Std. 202 method 101 (test cond. B)
Temperature cycling	MIL-Std. 202 method 102 (test cond. D)
Altitude	MIL-Std. 202 method 105 (test cond. C)

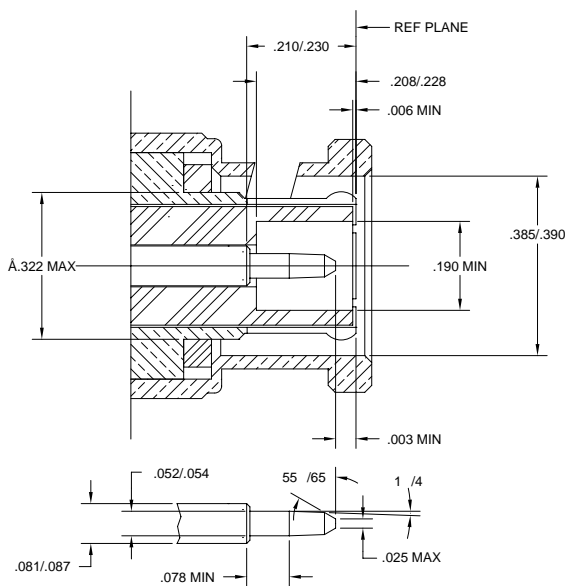
MILITARY SPECIFICATIONS

MIL-C-39012	Where applicable
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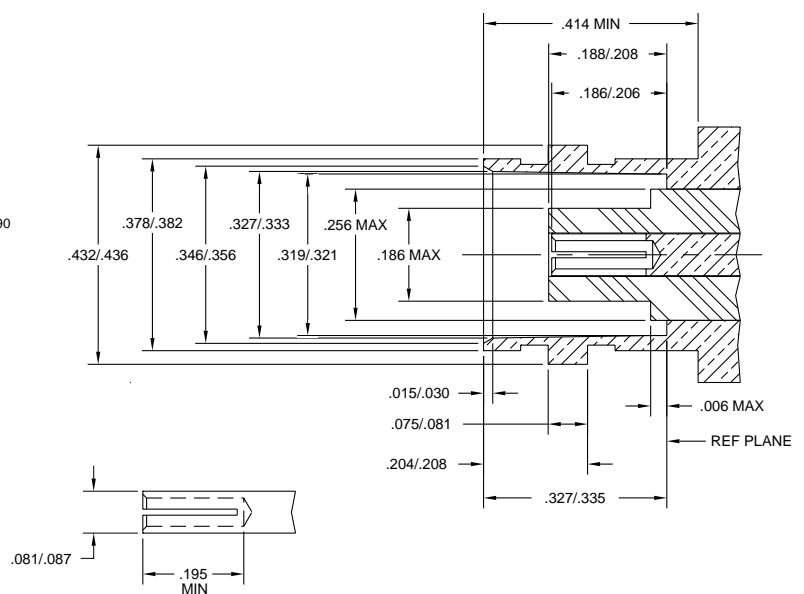
NOTE: These characteristics are typical and may not apply to all connectors.

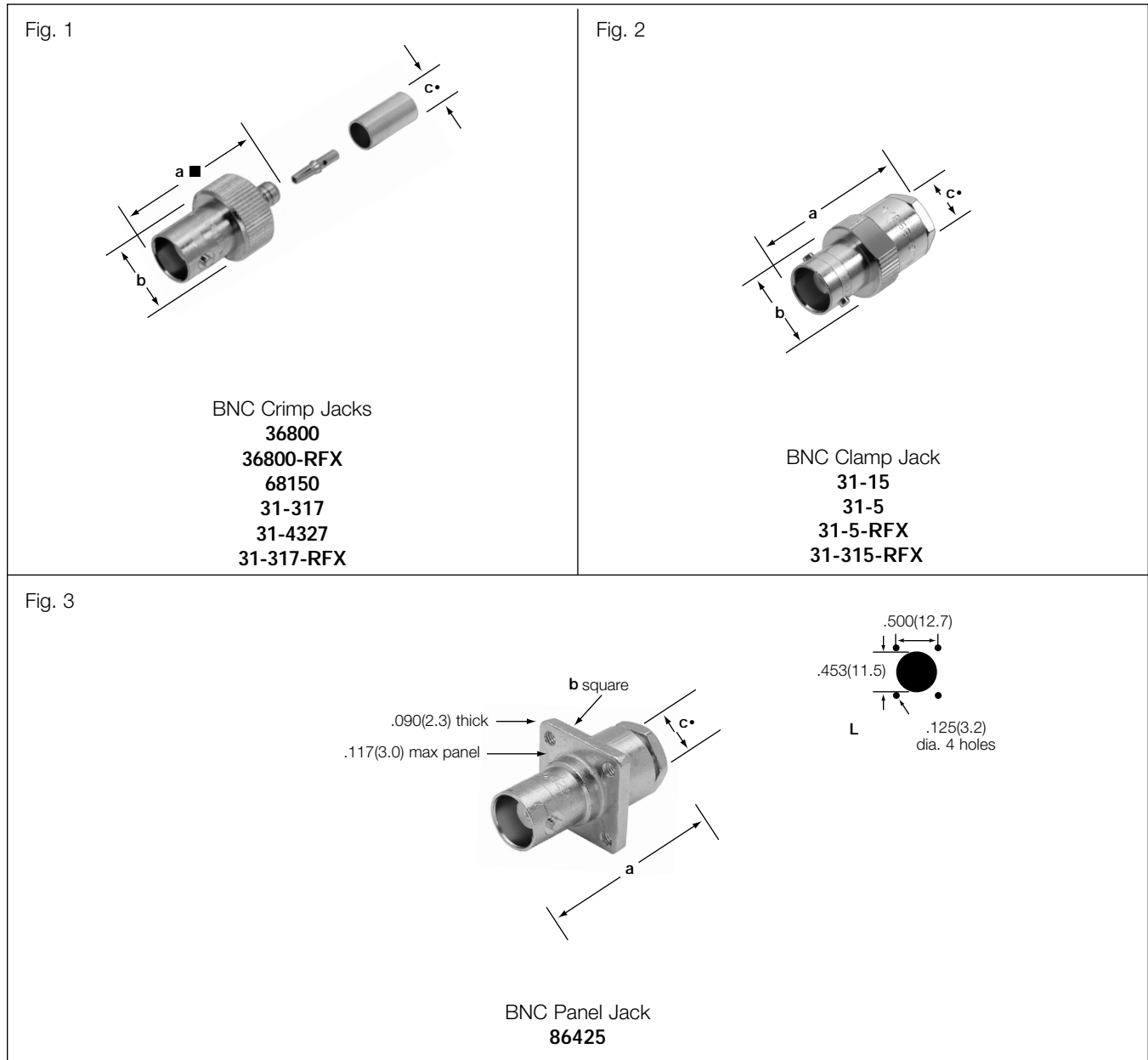
■ Also see 75 ohm BNC connectors in the following section

PLUG



JACK





BNC CABLE JACKS

Cable RG/U	Cable Attachment		Dimensions, inches (millimeters)			Construction Notes			Military Number	Amphenol Number	Fig.
	Outer	Inner	a ■	b	c •	CAI	Plt.	Ins.			
58, 141	Crimp	Crimp	1.17(29.8)	.562(14.3)	.206(5.2)	C26a	P33	D1	M39012/17-0013	31-4327*	1
	Crimp	Crimp	1.17(29.7)	.510(13.0)	.206(5.2)	C26a	P15	D1	—	36800*	1
	Crimp	Crimp	1.32(33.5)	.435(11.0)	.210(5.3)	C26a	P7	D23	—	36800-RFX	1
59, 62, 71, 140, 210	Clamp	Solder	1.14(29.0)	.562(14.3)	.259(6.6)	C25	P1	D1	UG-261/U	31-15*	2 ▲
174, 188, 316	Crimp	Crimp	1.19(30.2)	.571(14.5)	.106(2.7)	C26a	P15	D23	—	31-315-RFX	2
223	Clamp	Solder	1.14(29.0)	.562(14.3)	.220(5.0)	C25	P1	D1	UG-89/U	31-5	2 ▲
174, 188, 316	Crimp	Crimp	1.07(27.3)	.453(11.5)	.106(2.7)	C26a	P15	D23	—	31-317-RFX	1
174, 188, 316	Crimp	Crimp	1.39(35.3)	.562(14.3)	.125(3.2)	C26a	P15	D1	—	31-317*	1
174, 179, 187, 188, 316	Clamp	Solder	1.14(29.0)	.687(17.5)	.117(3.0)	C25	P1	D1	—	86425*	3
59, 62, 140, 210	Crimp	Crimp	1.18(30.0)	.510(13.0)	.261(6.6)	C26a	P15	D1	—	68150*	1 ▲
223	Clamp	Clamp	1.14(29.0)	.562(14.3)	.220(5.0)	C25	P1	D1	—	31-5-RFX	2

• accommodates cable diameter * recognized under the component program of U.L., Inc. ▲ distributor stocked ■ includes outer ferrule