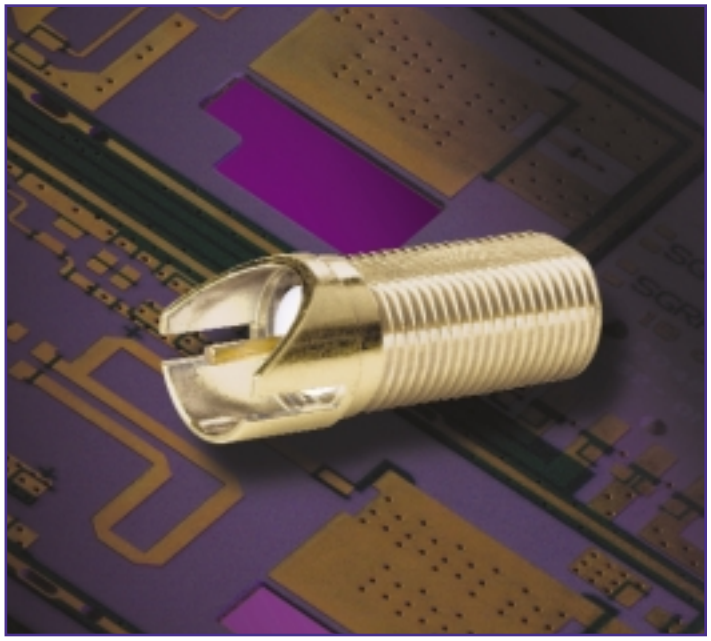
Trompeter Carrier Class High Frequency "F" Connectors

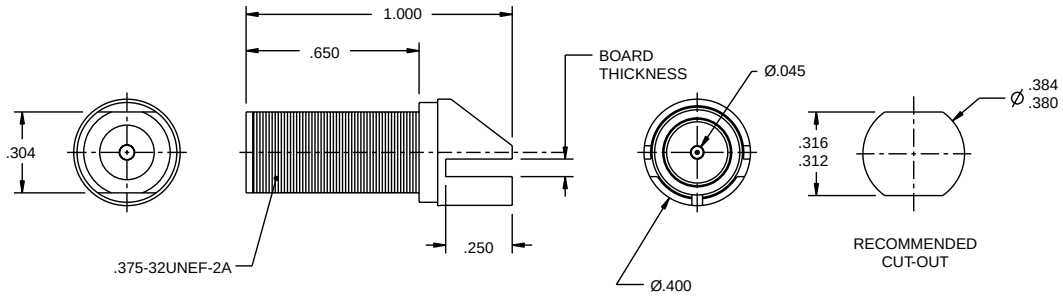
Printed Circuit Board Edge Mount "F" Connectors

Trompeter offers a wide range of F connector series products, including a new edge-mount circuit board F-connector, the CBJE130. The unique design of this new connector features a center pin in-line with the plane of the board for superior signal integrity. This side launch design approach also features a much lower profile than standard right angle jacks, for reduced board space requirements. The CBJE130 was designed for applications such as broadcast and cable box products and is part of the new high frequency PCB coax connector series featured in the PCB Design Guide from Trompeter.



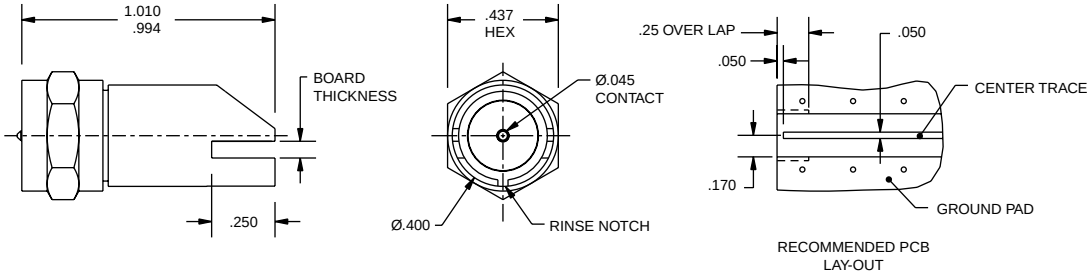
CBJE130-1 or -2
Circuit Board Edge Mount "F" Style Female Jack

PART NO	BOARD THICKNESS
CBJE130-1	.060 - .064
CBJE130-2	.028 - .033
CBJE130-3	.090 - .094



CBPLE130-1,-2, or -3
Circuit Board Edge Mount "F" Style Male Plug

PART NO	BOARD THICKNESS
CBPLE130-1	.060 - .064
CBPLE130-2	.028 - .033
CBPLE130-3	.090 - .094



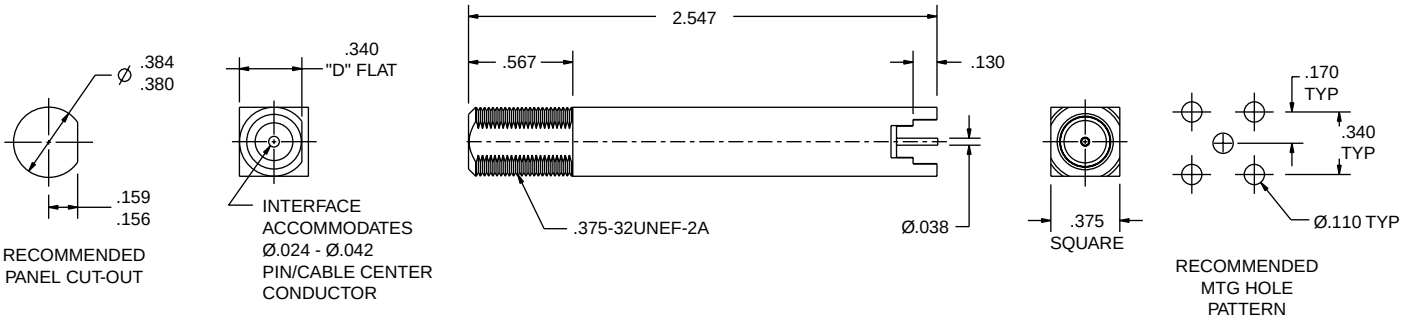
TROMPETER ELECTRONICS, INC.

DIRECT: 1-818-707-2020 · TOLL FREE: 1-800-982-2629 · FAX: 1-818-706-1040 · WEBSITE: WWW.TROMPETER.COM

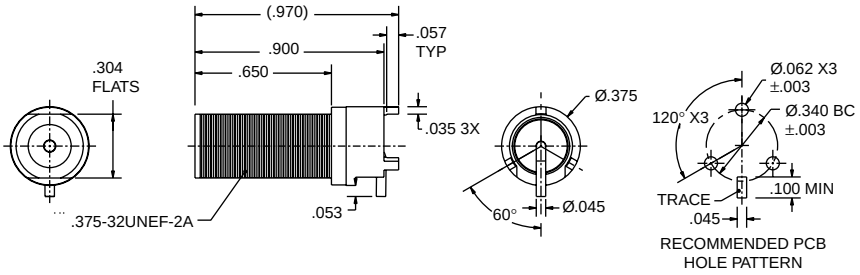
Carrier Class High Frequency "F" Connectors

Printed Circuit Board "F" Connectors

CBJ130L
Circuit Board Mount "F" Style Long Receptacle

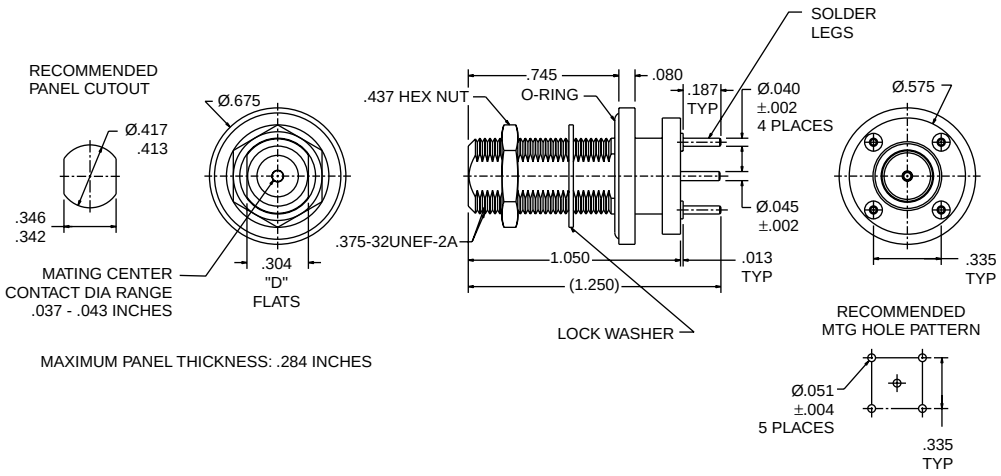


105-2137
"F" Series Three Post Circuit Board Mount Receptacle with Special Right Angle Contact



MATING CENTER CONTACT RANGE Ø.024 - .042

CBBJ139
"F" Series, Bulkhead, Circuit Board Mount Receptacle



MAXIMUM PANEL THICKNESS: .284 INCHES

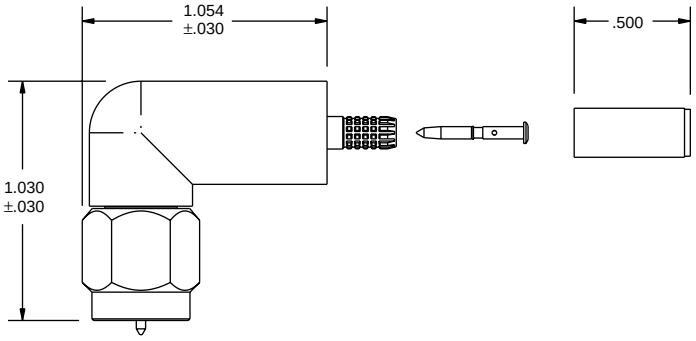
Carrier Class High Frequency "F" Connectors

Three - Piece "F" Connectors

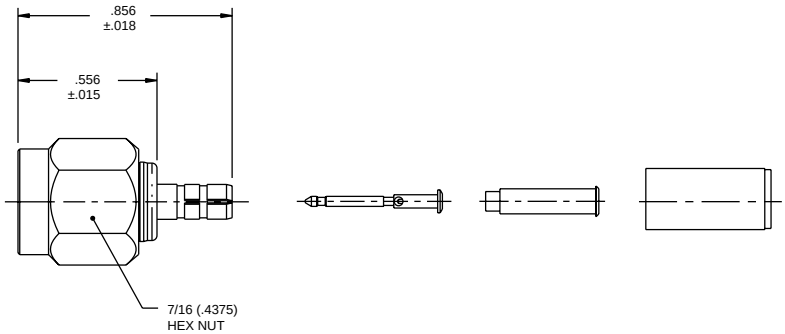
Trompeter Electronics announces the addition of a new high performance 90 degree F-connector for wireless data applications. The right angle configuration of this F-connector accommodates situations where space constraint is problematic, and allows for increased connector density in a given area.

The new PLR130SC delivers excellent frequency response over an extended bandwidth, and can be assembled to any standard coax cable using standard Trompeter installation tools.

PLR130SC-(Dash No. from Chart Below)
75 Ohm Right Angle "F" style Full Crimp Cable Plug



PL130SC-(Dash No. From Chart)
75 Ohm "F" Type Tool Crimp Plug



These parts use traditional crimp/crimp installation tools widely developed by Trompeter. See www.trompeter.com

DASH NO	CABLES ACCOMMODATED	A HEX
-001	RG-178, -196	.178
-002	HEWLETT PACKARD 8120 - 1107	.197
-003	RG-174, 316	.178
-004	RG-179, 187	.178
-005	NORTHERN ELECTRIC DBL - SHLD RG-187	.197
-006	GC875GPI, GRUMMAN DBL - SHLD RG-188	.197
-007	275-3991, MICRODOT	.178
-008	RG-195, -180 421-111, ESSEX	.178
-009	8218, BELDEN YR23023 BELDEN 21-597, ESSEX	.178
-011	RG-58, RG-141, RG-303, TCC-50-2	.213
-013	RG-59	.255
-013A	TCC-75-2	.255
-013B	RG-62	.255
-014	8212, BELDEN	.255
-015	730A, LUCENT	.290
-015A	RG-71	.290
-016	724, LUCENT 8281, BELDEN	.324
-017	RG-6	.344
-018	9268, BELDEN	.255
-019	8279, BELDEN	.255
-020	9248, BELDEN	.290
-021	88240, BELDEN	.213
-022	88241, 88269, BELDEN	.255
-023	89108, BELDEN	.255
-024	89120, BELDEN	.290
-025	734A, LUCENT	.255
-026	735A, LUCENT	.178
-027	KS19224L2, LUCENT	.178

Reference cables, call factory for other cable options

Carrier Class High Frequency "F" Connectors

One-Piece "F" Connector

F CONNECTORS

A New Concept in Broadband "F" Connector Plugs Designed with digital, high bandwidth performance requirements in mind...

PL130C Series
Trompeter One Piece F Connector with Captivated Center Contact
(Patent #5860833)

This unprecedented and totally redesigned "F" connector was created with a high priority on electricals (higher frequency) and mechanicals (positive mating conditions and ease of installation).

This innovative design (patent number features an *integrated center contact pin* enabling excellent electrical characteristics and avoiding the problems associated with using the center wire of the cable itself as the center contact. This pin is fully captivated in the dielectric and eliminates the possibility of misalignment during mating, a common problem associated with the traditional F connector. Trompeter's PL130C Series "F" connector out-performs competing products in this space with a return loss of <-22dB at 2GHz and <-36dB at 1GHz.

PL130C SPECIFICATIONS:

ELECTRICAL DATA:

Characteristic Impedance:	True 75 Ohm
Insertion Loss:	0.3dB at 1GHz
Insulation Resistance:	>5000 megohms
VSWR:	1.065 max up to 1GHz
Return Loss:	-36dB at 1GHz, -23dB at 2GHz

MECHANICAL DATA:

Interface:	SCTE IPS-SP-401
Mating Torque:	100+ in lbs.
Pull Strength:	2X Bellcore specifications
Material:	
Connector Body:	Brass Alloy C36000 per ASTM-B16, Nickel plated per MIL-P-27418
Center Contact:	Brass Alloy C36000 per ASTM-B16
Dielectric:	PTFE per ASTM-D1710 or FEP per ASTM-D2116
Environmental:	Meets all Bellcore GR-1503-CORE indoor specifications.

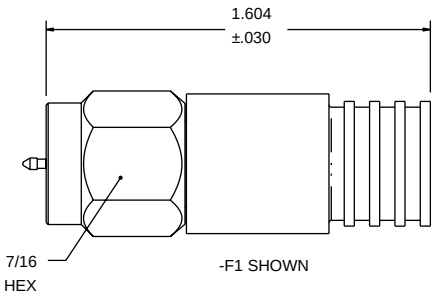
ONE-PIECE "F" CONNECTOR

Application Note:

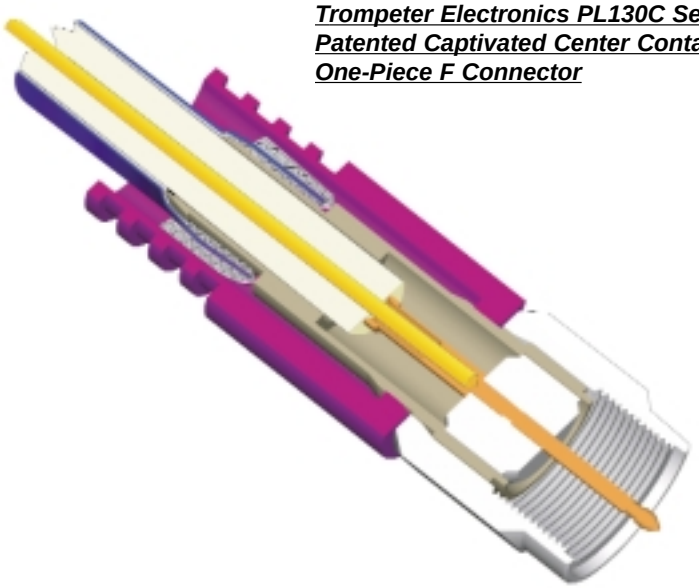
With conventional "F" connector designs that utilize the center wire itself as the male mating contact, the variation caused by diverse wire diameters can contribute to bit errors in the signal transmission. With our innovative designs, Trompeter is providing the market with a top-of-the-line connector to match the quality of electrical clarity and rugged performance you have come to expect from Trompeter. This design sets *a new standard* for the "F" connector in Broadband applications (Headend applications, cable TVset-top boxes, cable modem for Internet connectivity, and Hybrid Fiber Coax networks in general).

PL130C-(Dash No. From Chart)
75 Ohm Male Type "F" Coaxial Cable Plug

PART NO	A DIM	CABLES ACCOMMODATED
PL130C-F1	.360	COMMSCOPE 6 SERIES QUAD (P/N 5740) (P/N F6SSVV)
PL130C-F2	.324	BELDEN 6 SERIES (P/N 82120) (P/N 9114)
PL130C-F3	.360	COMMSCOPE 59 SERIES (P/N S 59 HEC)



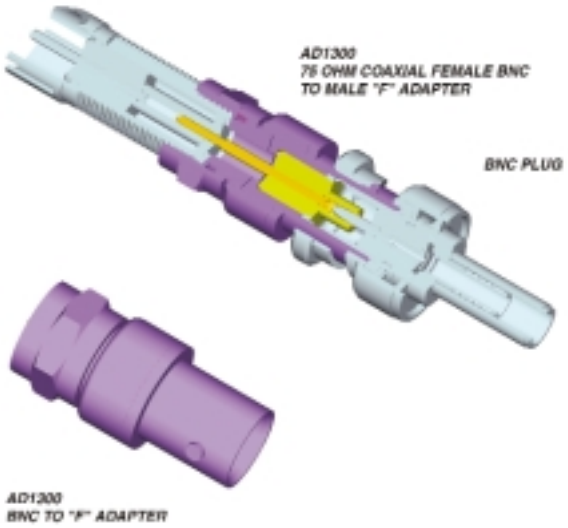
Trompeter Electronics PL130C Series Patented Captivated Center Contact One-Piece F Connector



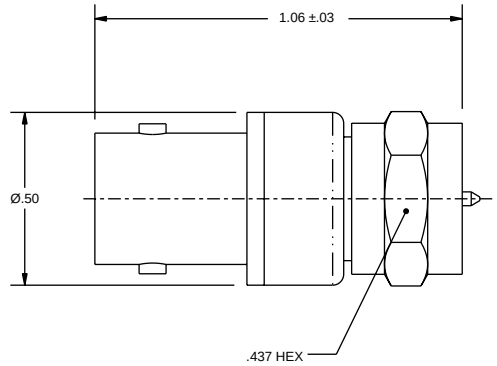
Legacy Traditional F Connector

Carrier Class High Frequency "F" Connectors

BNC to Male "F" Adapter



The connector solution for CATV appliances! Whether you are dealing with a set-top box or a cable modem, convert your problem F connector jack to a BNC at the jack or socket and enable Carrier Class performance. Face it, the single largest technical problem with the HFC deliver network used by cable TV service providers is the F connector. The F was selected back when CATV was one way residential only entertainment delivery system for television. Today, that same network has been "closed up" to handle internet two-way data flow and has been tasked to enable all the important transactions that go with home internet connectivity including monetary transfers and stock purchase transactions. The HFC CATV network, in accepting the same QoS service levels of the telephone industry (Carrier Class reliability = 99.999% uptime). What better way than to convert from the F connector to the Telco standard connector, the Trompeter BNC series? This is enabled by using the Trompeter AD1300 between series adapter (photo above), which converts your F jack into a BNC jack at the device.



AD1300
Between Series 75 Ohm Coaxial Female BNC to Male "F" Adapter

Dialogue Box

So what is wrong with the traditional F connector series as deployed in most CATV networks? What features of the garden-variety F stand in the way of Carrier Class performance in the HFC network?

Let us review:

If no center pin is used, the contact is the center wire of the wire itself

- This is either totally unplated or is plated with metals that were not designed to provide good mating surface
- This center wire is of diameter to match the other characteristics of the cable for 75 ohm performance. The F specification allows for a wire diameter for the center conductor to be 0.022 to 0.052 inches - a range that, when mated to a female socket, is not appropriate for impedance matching for higher frequency.
- Further, when a large diameter wire is used and is then followed by a smaller diameter wire, the socket is distorted by the larger wire diameter and no longer makes intimate contact with the smaller wire.

In addition, the F connector uses a threaded coupling sleeve to ensure ground. In conditions of temperature excursions, threaded connectors have a tendency to work loose due to differing coefficients of thermal expansion caused the jack usually being attached to a heat sink or a heat source. Fortunately, all these problems and drawbacks of the traditional HFC network can be overcome by using this adaptor at the appliance and Telco industry standard BNC connectors for the rest of the wiring assignment. At Trompeter, our job isn't done until Carrier Class performance is achieved!