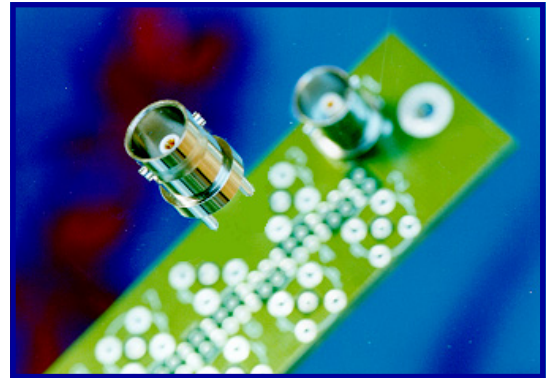


## Press fit BNC Co-axial Connector

### Features:

- **No design change costs**  
the footprint is identical to solder BNC connectors minimising board re-design changes.
- **High retention forces**  
unique construction method gives retention forces up to 780N
- **Lower inspection costs**  
consistent gas tight joint every time independent of operator skills
- **Reduced stock costs**  
fast throughput ensures work in progress is greatly reduced.
- **Increased connection density**  
low profile provides higher stacking densities.
- **Safety and environment benefits**  
press fit termination creates no fumes or hazardous waste.



**The new BNC Press Fit series introduced by Cambridge Connectors, which interfaces to all standard BNC connectors,** incorporates several innovative features providing considerable benefits over other types. (These features have been design right protected by Cambridge Connectors).

Contact Shape The contact combines traditional Press Fit technology (square pin in a round hole) with modern compliant fit theory (easily deformed, shaped contacts) giving a contact which benefits from having a high retention force but low distortion of the PCB hole. This design allows the Cambridge Connectors Press Fit BNC connector to be used over a range of hole sizes to suit a variety of withdrawal force requirements.

Contact Material The degree of contact deformity is a direct function of the material used. The contact composition of Cambridge Connectors BNC connector ensures that sufficient distortion of the contact takes place to give a gas tight connection while maintaining lower insertion forces.

Standard Footprint The footprint of the Press Fit BNC is identical to standard solder BNC connectors. This means that PCB's designed to accept solder BNC connectors can also accept Cambridge Connectors Press Fit BNC without modification to track layouts; some changes to hole sizes may be required depending on application (see specification).

**Press fit BNC Co-axial Connector**

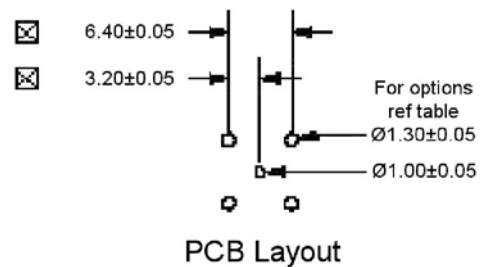
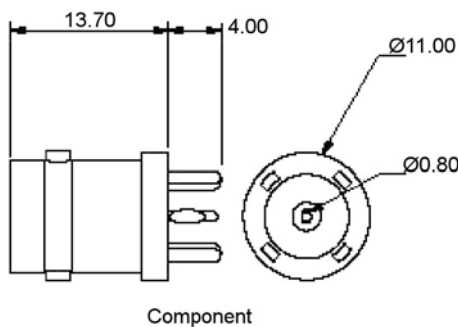
Low Profile The Cambridge Connectors Press Fit BNC connector at 13.7mm, has one of the lowest profiles available. This is an important space saving feature which enables a higher stacking density of PCB cards. It also reduces the possibility of accidental damage caused by connectors protruding. (Different profiles are available if required).

Multiple Insertion Tooling Although Press Fit BNC connectors can be installed individually much more quickly than solder versions it is when multiple insertions are made that considerable cost savings can be achieved. In a typical application 8 Press Fit BNC connectors can be installed in a single cycle in less than 20 seconds. This is achieved using multi-positional tooling available from Cambridge Connectors. As a result production volumes can increase significantly and working stock can be reduced.

Range of Extraction Forces Depending on the application, the Press Fit BNC can be used with PCB holes of standard diameters between 1.3mm and 1.5mm. The specification overleaf shows the variations in extraction forces achieved at hole diameters of 1.3, 1.4 and 1.5mm. Cambridge Connectors recommend a hole size of 1.4mm for optimum performance but perfectly satisfactory results are achieved at 1.3 and 1.5mm.

Consistent Performance The material contacts and construction method of the BNC Press Fit connector from Cambridge Connectors ensure consistent results. In this way the installation process is independent of operator skills. Such consistency greatly reduces physical and electrical inspection costs.

Environmentally Friendly Press Fit techniques produce no fumes or chemical waste, an important aspect with regard to the control of substances hazardous to health (COSHH) and the safe disposal of hazardous materials.



**Notes:** PCB thickness 3.6mm  
PCB material FR4

Hole Dia mm	Plating Thickness		Pad Dia.
	Copper	Tin Lead	
1.3	0.03-0.08	0.008	2.0
1.4	0.03-0.08	0.008	2.2
1.6	0.03-0.08	0.008	2.3
1.0	0.03-0.08	0.008	1.6

**Press fit BNC Co-axial Connector****Specification****Material:**

Body:	Turned Brass	Nickel Plated
	Centre Contact	Phosphor Bronze
	Insulator	Teflon

**Electrical:**

Impedance	50 Ohm	75 Ohm
Frequency Range	0-4 GHz	0-1 GHz
VSWR	1.3(DC-1GHz)	1.05(DC-1GHz)
Working Voltage:	<500 V rms	<500 V rms
Insulation Resistance:	>5000 M Ohms	>5000 M Ohms

**Mechanical:**

Outer Diameter	1.3mm	1.4mm	1.5mm
Inner Conductor Diameter:	1.0mm	1.0mm	1.0mm
Extraction Force:	>780N	>505N	>265N
Board Thickness:	<3.5mm	<3.5mm	<3.5mm

**50 Ohm Connector unique Part No. XBT-1050-NGAW**

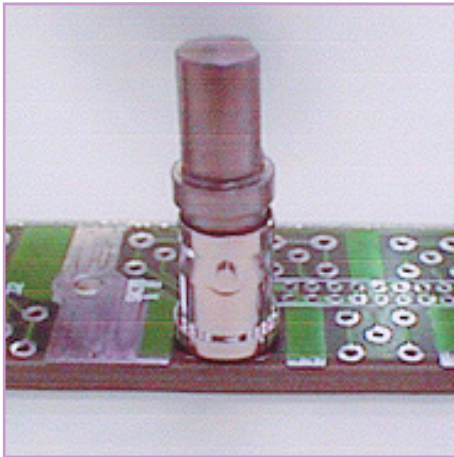
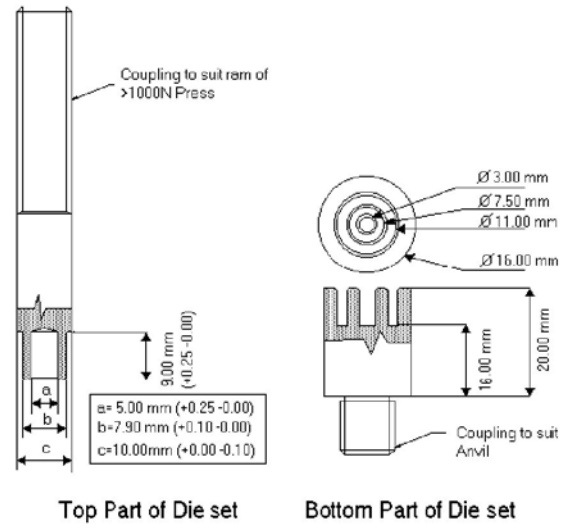
**75 Ohm Connector unique Part No. XBT-1050-NGAY**

**75 Ohm Connector with protective insulator unique Part No. XBT-1052-NGAY**

Cambridge Connectors Press Fit BNC is also available in different heights and a variety of footprints. It is also available in right angle versions. Contact Sales desk for further information

**Press fit Co-axial Connector Tooling**

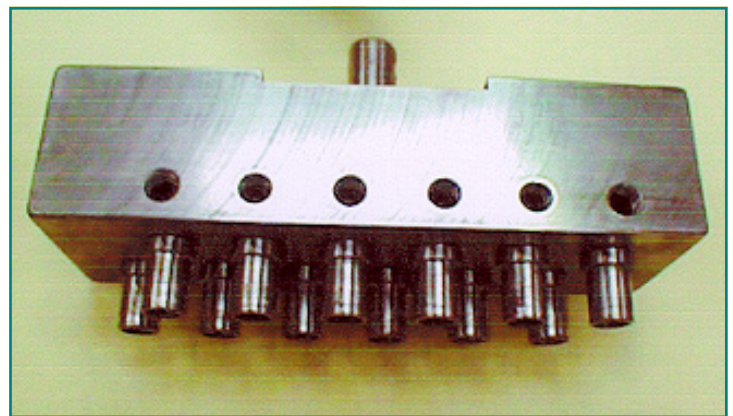
The diagram illustrates a typical two piece die set for the insertion of Cambridge Connectors' Press Fit BNC into Printed Circuit Boards. Couplings will vary depending on the equipment being used.



**Single Position Tooling**

The photograph opposite shows an example of a single position die set for the insertion of individual BNC connectors.

The photograph opposite shows an example of multi position tooling for the insertion of several BNC connectors in one operation. In this case die sets are mounted into a bolster designed to meet the layout requirements of the PCB.



**Multi Position Tooling**

It must be noted that the insertion forces specified are for each individual connector. Multi-insertion requires forces proportional to the number of connectors being inserted.

For further information on Press Fit tooling contact our technical applications department.