

Real 75 ohm BNC Connectors for HDTV Serial Video Applications

Introduction

High definition broadcast applications are pushing the operating parameters of interconnection products to the limit. To help meet these demands, Cambridge Connectors has designed a new range of 75 ohm BNC connectors which operate at the increased bandwidth and frequencies now required for HD Serial Digital Video environments.

These real 75 ohm connectors, which incorporate advanced geometry designs and specialised materials, include the following styles: edge card mounting; 2 part range for rapid board swap; low profile right angle version for high board densities; hybrid press fit for reduced production costs; top entry solder PCB mounting style.

As a specialist supplier to the broadcast industry, Cambridge Connectors works in close partnership with its customers to produce interconnection solutions. In addition to standard product, Cambridge Connectors can provide custom products to meet the specialised needs of its customers.

For more details contact our applications engineers on.

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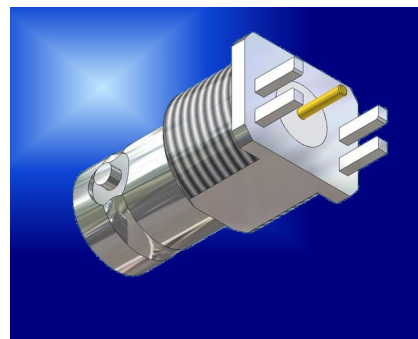
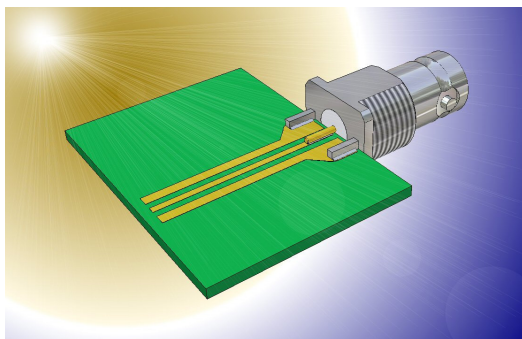
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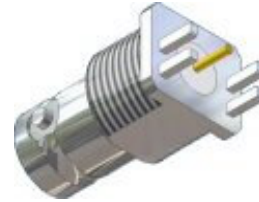
To complement these new products, Cambridge Connectors also produces real 75 ohm BNC patch leads in either standard length or built to customer specification.

Real 75 Ohm BNC connectors for HDTV Broadcast Applications

Edge card mounting

Features

- Real 75 Ohm BNC Connector
- Designed for HD SDV applications
- PCB edge mounting style minimises signal path discontinuities
- 75 ohm optimised PCB layout guide available
- RoHS Compliant
- Low profile feature gives high wiring densities
- True 75 ohm BNC patch leads also available



General Description

BNC, female bulkhead 75 ohm PCB edge mount connector.

Applications

It is specifically designed for the broadcast industry for use in HDTV, Serial Video applications where accurate 75 ohm connectivity is necessary.

Specification

Electrical

Impedance	75 Ohm
Frequency Range	0 – 3.0 GHz
Working Voltage	500 V _{rms}
Dielectric Withstanding Voltage	1500 V _{rms}
Reflection Factor (VSWR)	1.09 ^(Max) 0 – 1.5 GHz
Contact Resistance	Centre Contact 1.5 milli Ohm Outer Contact 1.0 mill Ohm
Insulation Resistance	> 5000 Meg Ohm

Materials

Centre Pin	Phosphor Bronze / 10μ " Au
Metal Parts	Brass / Nickel
Insulators	Teflon [®]

High definition broadcast applications are pushing the operating parameters of interconnection products to the limit. To help meet these demands, this new True 75 ohm BNC connector, incorporates an innovative PCB edge mounting style. This provides a straight signal path along the connector, through the point of interface and onto the PCB track with minimal loss of transmission characteristics. The resultant VSWR of 1.09^(Max) over a frequency range of 0 – 1.5 GHz and working voltage of 500V rms means this BNC connector more than meets HD Serial Digital Video requirements.

Low Profile

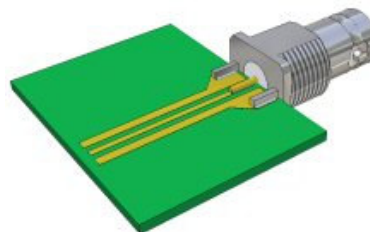
An additional feature of the PCB edge mounting style is the low profile offered, enabling higher wiring densities, a major benefit in the design of broadcast equipments.

Patch Leads

To complement this new product Cambridge Connectors also produces True 75 ohm BNC patch leads in either standard length or built to customer specification.

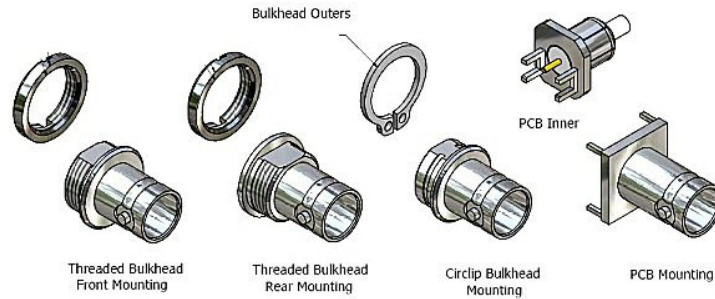
A 75 ohm optimised PCB layout guide is available on request.

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Real 75 Ohm BNC connectors for HDTV Broadcast Applications

Two part design for rapid board swap



Features

- Real 75 Ohm BNC Connector
- Designed for HD SDV applications
- Two part construction for rapid board swap
- PCB or front and rear bulkhead mounting
- Circlip or threaded versions
- RoHS Compliant
- True 75 ohm BNC patch leads also available

General Description

Two piece BNC female bulkhead, real 75 ohm connectors, available in the following parts: -

Inner for 1.6 mm PCBs.
 Inner for 2.4 mm PCBs
 Inner for 3.2 mm PCBs
 Inner for top entry
 12 mm Circlip

Outer for Circlip Bulkhead Mount
 Outer for Threaded Rear Bulkhead Mount
 Outer for Threaded Front Bulkhead Mount
 Outer for PCB Mount

Applications

This two part 75 ohm BNC female connector range is specifically designed for the broadcast industry. It allows daughter boards in switching and routing equipment to be swapped out without the necessity of removing attached patch cables; this greatly reduces downtime.

The range includes: - PCB mounting; Rear and Front mounting bulkhead versions, secured by threaded nuts; and also a circlip bulkhead version. The PCB mounting "inner" is edge mounting to ensure real 75 ohm performance.

Specification

Electrical

Impedance	75 Ohm
Frequency Range	0 – 3.0 GHz
Working Voltage	500 V _{rms}
Dielectric Withstanding Voltage	1500 V _{rms}
Contact Resistance	Centre Contact 1.5 milli Ohm Outer Contact 1.0 mill Ohm
Insulation Resistance	> 5000 Meg Ohm

Materials

Centre Pin	Phosphor Bronze / 10µ " Au
Metal Parts	Phosphor Bronze / Brass / Nickel
Insulators	Teflon®

High definition broadcast applications - this real 75 ohm BNC connector range, incorporates an innovative PCB edge mounting style. This provides a straight signal path along the connector, through the point of interface and onto the PCB track with minimal loss of transmission characteristics.

Patch Leads

To complement this new product Cambridge Connectors also produces True 75 ohm BNC patch leads in either standard length or built to customer specification.

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Real 75 Ohm BNC connectors for HDTV Broadcast Applications

Low profile (4mm centre) right angle PCB mounting

Features

- Real 75 Ohm BNC Connector
- Designed for HD SDV applications
- Low profile allows higher wiring densities
- RoHS Compliant
- True 75 ohm BNC patch leads also available



General Description

BNC, female, low profile, right angle PCB mounting 75 ohm connector. Tailored geometry design coupled with judicious use of appropriate raw materials ensures that true 75 ohm performance is achieved.

Applications

It is particularly suitable for the broadcast industry for use in HDTV, Serial Video applications where true 75 ohm connectivity is essential. With a centre line of 4mm above the board, its low profile permits closer packing densities of daughter boards, which allows reduction in the bulk of routing and switching equipment.

Specification

Electrical

Impedance	75 Ohm	
Frequency Range	0 – 3.0 GHz	
Working Voltage	500 V _{rms}	
Dielectric Withstanding Voltage	1500 V _{rms}	
Contact Resistance	Centre Contact	1.5 milli Ohm
	Outer Contact	1.0 mill Ohm
Insulation Resistance	> 5000 Meg Ohm	

Materials

Centre Pin	Phosphor Bronze / 10μ " Au
Metal Parts	Brass / Nickel
Insulators	Teflon®

Patch Leads

To complement this new product Cambridge Connectors also produces True 75 ohm BNC patch leads in either standard length or built to customer specification.

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Real 75 Ohm BNC connectors for HDTV Broadcast Applications Top Entry PCB Mounting Press Fit Hybrid

Features

- Real 75 Ohm BNC Connector
- Designed for HD SDV applications
- Hybrid design combines advantages of press fit and solder
- Press fit techniques offer unequalled manufacturing economies
- Solder centre contact ensures real 75 ohm performance
- RoHS Compliant
- True 75 ohm BNC patch leads also available



Press fit manufacturing techniques allow large numbers of connectors to be pressed simultaneously into a PCB to form a secure electrical and physical bond. This offers considerable economies over traditional solder methods. To exploit the advantages of press fit production methods in HD SDV applications Cambridge Connectors has, using radical internal geometry and specialised materials, developed a hybrid BNC product. This unique Real 75 ohm BNC connector can be pressed into the PCB in one operation to secure the outer contacts; a further solder operation then provides the true 75 ohm bond with the centre contact.

General Description

Straight PCB mounting real 75 ohm female press fit BNC connector.

Applications

It is specifically designed for the broadcast industry for use in HDTV, Serial Video applications where accurate 75 ohm connectivity is necessary and where press fit manufacturing processes are adopted.

Specification

Electrical

Impedance	75 Ohm
Frequency Range	0 – 3.0 GHz
Working Voltage	500 V _{rms}
Dielectric Withstanding Voltage	1500 V _{rms}
Contact Resistance	Centre Contact 1.5 milli Ohm Outer Contact 1.0 mill Ohm
Insulation Resistance	> 5000 Meg Ohm

Materials

Centre Pin	Phosphor Bronze / 10μ " Au
Metal Parts	Brass / Nickel
Insulators	Teflon®

Patch Leads

To complement this new product Cambridge Connectors also produces True 75 ohm BNC patch leads in either standard length or built to customer specification.

For more information on press fit manufacturing processes and how significant cost savings can be achieved using press fit techniques, contact our applications engineers on.

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Real 75 Ohm BNC connectors for HDTV Broadcast Applications Top Entry PCB Mounting

Features

- Real 75 Ohm BNC Connector
- Designed for HD SDV applications
- RoHS Compliant
- True 75 ohm BNC patch leads also available



General Description

Straight PCB mounting real 75 ohm female BNC connector. Although superficially similar to standard 75 ohm BNC products, enhanced internal geometry and the use of specialised materials produces a product with true 75 ohm performance.

Applications

It is specifically designed for the broadcast industry for use in HDTV, Serial Video applications where accurate 75 ohm connectivity is necessary.

Specification

Electrical

Impedance	75 Ohm
Frequency Range	0 – 3.0 GHz
Working Voltage	500 V _{rms}
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