Amphenol® RF

HD-AFI BOARD-TO-BOARD CONNECTOR SERIES

The Amphenol RF HD-AFI series offers a high-density board-to-board RF interconnect solution designed for a wide range of applications requiring reliable, high-frequency performance. With its miniature size and robust design, the HD-AFI series supports data transfer rates up to 12 GHz, making it ideal for advanced high-speed applications. These connectors feature a closed entry interface and push-on mating style, ensuring easy and secure connections even in tight spaces. The HD-AFI series offers multiple stack height options and is suitable for applications in telecommunications, networking, IoT, and automotive sectors, providing flexibility and enhanced signal integrity.

FEATURES AND BENEFITS

- Proprietary configuration that allows for industry leading “float”
- Closed entry interface with crash-proof mating design
- Board-to-board mating configurations

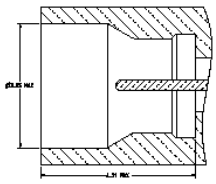
APPLICATIONS

- HD/SD Video Transmission
- Set-Top Boxes & Cable Modems
- Satellite & Cable TV Infrastructure
- Oscilloscopes & Signal Analyzers
- Production Test Fixtures
- Endoscopy & Ultrasound Equipment
- Machine Vision Systems
- Infotainment & Camera Systems

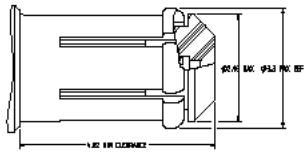
PRODUCT INFORMATION

INTERFACE DIMENSIONS

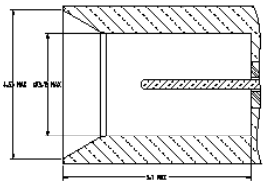
PLUG



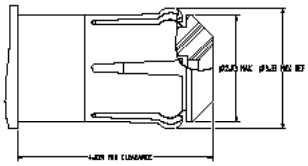
MACHINED BULLET



JACK



STAMPED BULLET



CONNECTORS

Part Number	Description
918-140P-71S	Straight PCB Limited Detent End Launch Jack
918-183P-71P	Right-Angle PCB Limited Detent Through-Hole Plug
918-210P-71P	Straight PCB Smooth Bore End Launch Jack

ADAPTERS

Part Number	Description
AD-HDBNCHDAFI-2	HD-AFI Jack to HD-BNC Jack Adapter 75 Ohm Straight Thread-In

TECHNICAL SPECIFICATIONS

Electrical

Impedance	75 Ohm
Frequency Range	DC - 12 GHz
Voltage Rating	170 Volts RMS Continuous
Dielectric Withstanding Voltage	500 Volts RMS Min
VSWR (Return Loss)	
DC - 1 GHz	1.065 (-30 dB) Max
- 12 GHz	
Insulation Resistance	
Center Contact Resistance	
Outer Contact Resistance	
RF Leakage (Interface)	
Insertion Loss	.03 √(f(GHz)) dB Max
Power Handling	10 W @ 2 GHz @ 25°C

Environmental

Temperature Change	−65°C to +165°C
Coupling Mechanism	EIA-364-32, Method A, Condition II, 25 Cycles
Corrosion	EIA-364-65, Condition IIA, 336 hours
Vibration	EIA-364-28, Condition V, Letter C, for 120 Minutes in each of 3 direcitons
Mechanical Shock	EIA-364-27, Condition A, 3 shocks in each direction (18 total)
Moisture Resistance	EIA-364-31, Method III, Condition B
Moisture Resistance	EIA-364-31, Method III, Condition B

Mechanical

Mating Cycles	200 Min
Coupling Mechanism	Push-On
Interface Specification	Amphenol RF Proprietary
Engagement Force	6 N Max
Disengagement Force	1 N Max
Mechanical Misalignment	
Axial	2 mm
Radial	0.8 mm
Min Board-to-Board Distance	12 mm

Note: These characteristics are typical and may not apply to all connectors. Connector configurations may affect performance.