
Metal Port Option M for HFBR-14xx/2416 Series Components

Technical Data

Features

- **Nickel-Plated Aluminum Connector Receptacle**
- **Withstands Electrostatic Discharge (ESD) of 15 kV to the Port**
- **Significantly Decreases Effect of Electromagnetic Interference (EMI) on Receiver Sensitivity**
- **Allows Separate Signal and Metal Port Grounds**
- **Available with ST, Threaded ST Styled Ports**

Description

The metal port option for the HFBR-14xx/2416 Series gives designers the ability to have a metal connector receptacle with the familiar HFBR-14xx/2416 dual inline package (DIP). The metal port option components have an internal electrical connection between the metal port and the four grounding pins, as shown in the package outline drawing. Signal ground is separate from the four grounding pins to give flexibility in connecting the port to signal or chassis ground.

This feature aids in maintaining the integrity of the signal ground if the chassis is exposed to electrical noise. In addition, when the metal port is in good electrical contact with a well-grounded chassis, the metal port provides additional EMI shielding from electrically noisy circuits.

Applications

Agilent recommends that the designer use separate ground paths for the signal ground and the conductive metal port ground in order to minimize the effects of external coupled noise on receiver circuitry. If noise is present on the system chassis, care should be taken to electrically isolate the metal port from the chassis.

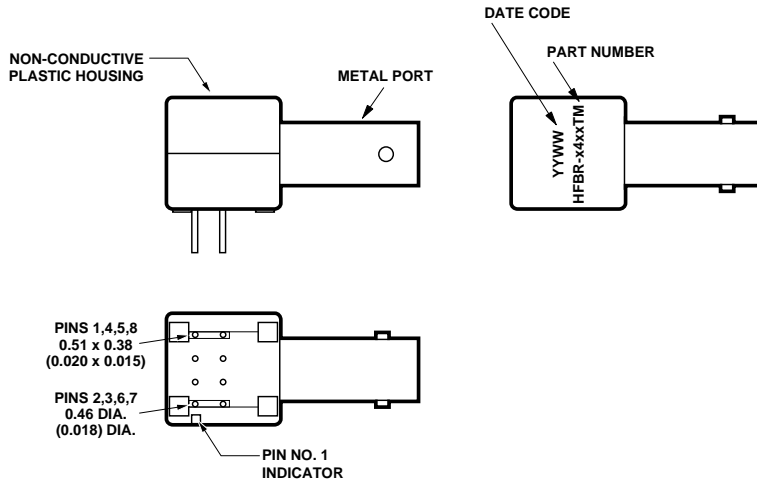
In the case of ESD, the metal port option does not alleviate the need for system recovery procedures. A 15 kV ESD event entering through the connector port will not cause catastrophic failure, but the metal port does not guarantee error-free performance during an ESD event.

Option M



The metal port option is available with ST, threaded ST (panel mount) styled port transmitters and receivers. The electrical/optical specifications, the mechanical dimensions, and the pinouts of the components with metal ports are identical to the standard plastic port products.

Package Outline



Pin	Function
1	Port Ground Pin
2	Part Dependent
3	Part Dependent
4	Port Ground Pin
5	Port Ground Pin
6	Part Dependent
7	Part Dependent
8	Port Ground Pin

Ordering Information

This option will be available with the following part numbers:

<u>Transmitters</u>	<u>Receiver</u>
HFBR-1412T	HFBR-2416
HFBR-1414	

Refer to the HFBR-14xx and HFBR-2416 data sheets for electrical/optical/mechanical specifications for each part. To order the metal port option with a particular transmitter or receiver component, simply add the letter "M" to the end of the standard part number. For example, HFBR-1412T with the metal port option is HFBR-1412TM.

Reliability Information

Low cost miniature link components with the metal port option use the same semiconductor devices and manufacturing processes as standard HFBR-14xx/2416 components, so reliability data for the HFBR-14xx/2416 Series is directly applicable. The tests listed below demonstrate the mechanical reliability of this package.

Mechanical and Environmental Tests

Test	MIL-STD-883 or Other Reference	Test Conditions	Units Tested	Total Failed
Temperature Cycling	1010 Condition B	-55° to +125°C, 15 minutes dwell, 5 minutes transfer, 170 cycles	40	0
Unbiased Pressure Pot Test		121°C, 100% relative humidity, 2 atmospheres, 48 hours	5	0
Mechanical Shock	2002 Condition B	5 blows each X1, X2, Y1, Y2, Z1, Z2 1500 G, 0.5 ms pulse	40	0
Vibration Variable Frequency	2007 Condition A	50 G, 20 to 2000 Hz, 4-minute cycles each X, Y, Z	40	0

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Data subject to change.
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