



High Power Isolator with 20 dB Isolation from
2 GHz to 4 GHz, 100 Watts and SMA Female

Isolators Technical Data Sheet

PE83IR1004

Features

- Forward Power 100 Watts
- Reverse Power 50 Watts
- Frequency Range of 2 to 4 GHz
- Female SMA Connectors
- Low VSWR

Applications

- Radar Systems
- Military
- Wireless Radio Systems
- Telecom Infrastructure
- Communication Systems
- R&D Labs
- Microwave Radio Systems

Description

The PE83IR1004 is a high power isolator offering a forward power rating of 100 Watts and reverse power rating of 50 Watts over an operational frequency band of 2 to 4 GHz. This coaxial part uses SMA female connectors on all ports and has a minimum of 20 dB of isolation.

Pasternack Enterprises offers a wide variety of isolators to fit your needs. These are two-port devices that transmit microwave or radio frequency power in one direction only and block the signal in the opposite direction. They can be thought of as a diode for RF energy. Isolators are used to isolate equipment from the effects of conditions outside of the equipment. For instance they are used to prevent a microwave source being detuned by a mismatched load. Pasternack's isolators feature excellent insertion loss, high isolation and reliability.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	2		4	GHz
Impedance		50		Ohms
Insertion Loss			0.6	dB
Isolation	20			dB
VSWR			1.3:1	
Forward Power, CW			100	Watts
Reverse Power, CW			50	Watts

Electrical Specification Notes:

To meet the 50 watt reverse power specification, a heat sink will be required.

Mechanical Specifications

Size

Length	1.6 in [40.64 mm]
Width	0.6 in [15.24 mm]
Height	1.6 in [40.64 mm]
Weight	0.2195 lbs [99.56 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [High Power Isolator with 20 dB Isolation from 2 GHz to 4 GHz, 100 Watts and SMA Female PE83IR1004](#)



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Configuration

Design

Single Junction

Package Style

Connectorized

Connector 1

SMA Female

Connector 2

SMA Female

Environmental Specifications

Temperature

Operating Range

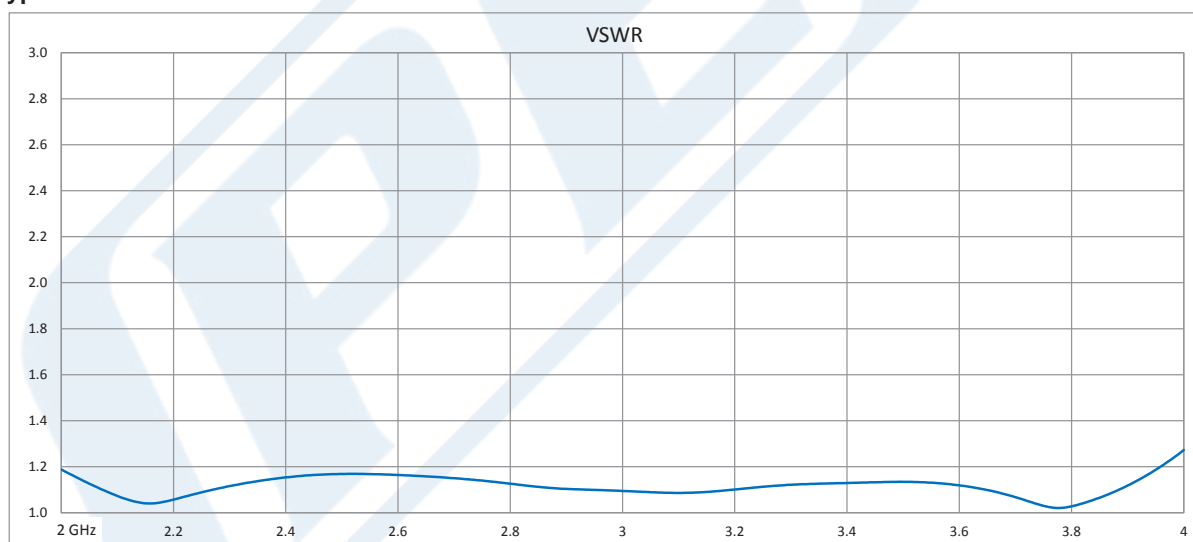
0 to +50 deg C

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



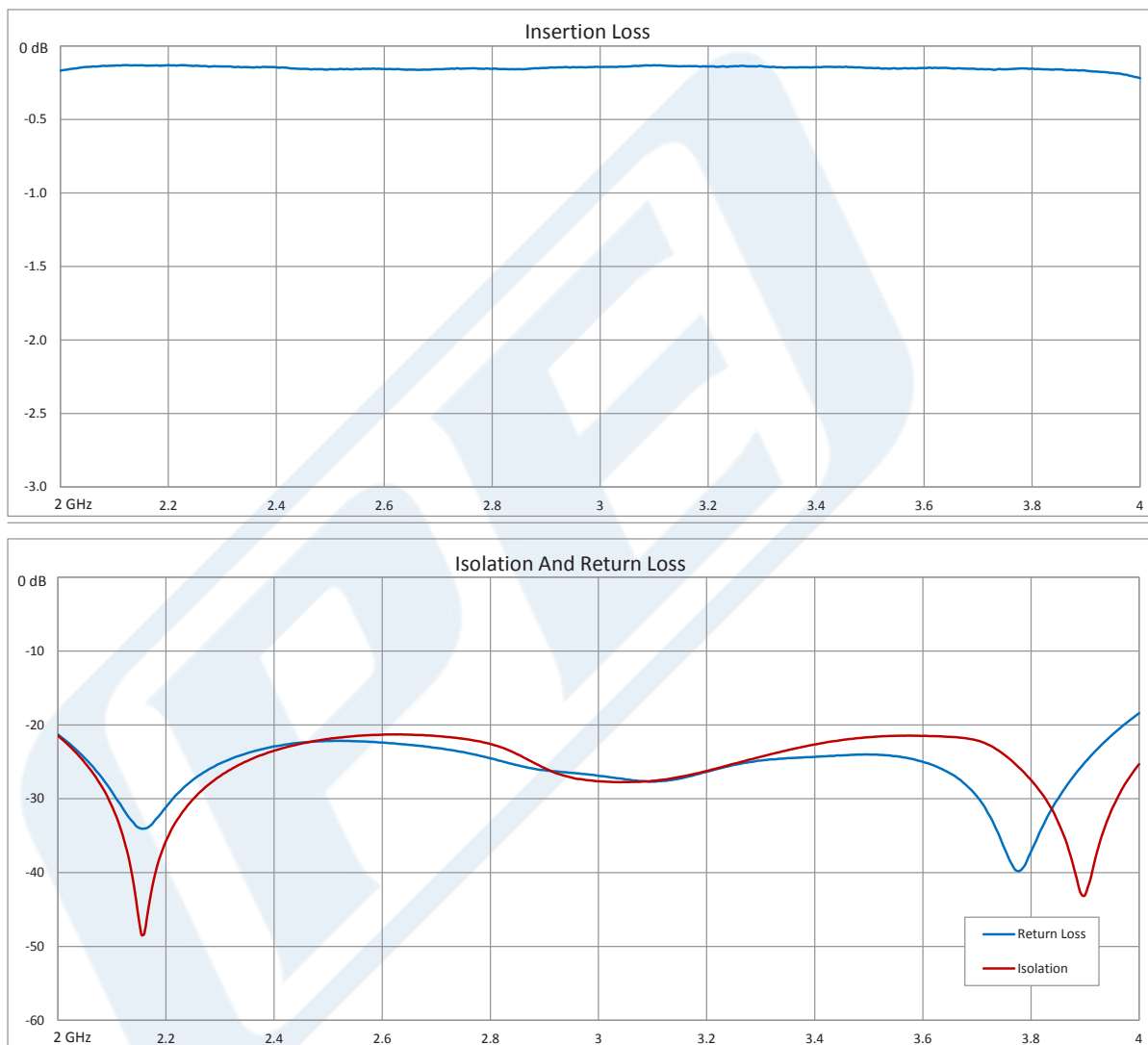
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High Power Isolator with 20 dB Isolation from 2 GHz to 4 GHz, 100 Watts and SMA Female from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

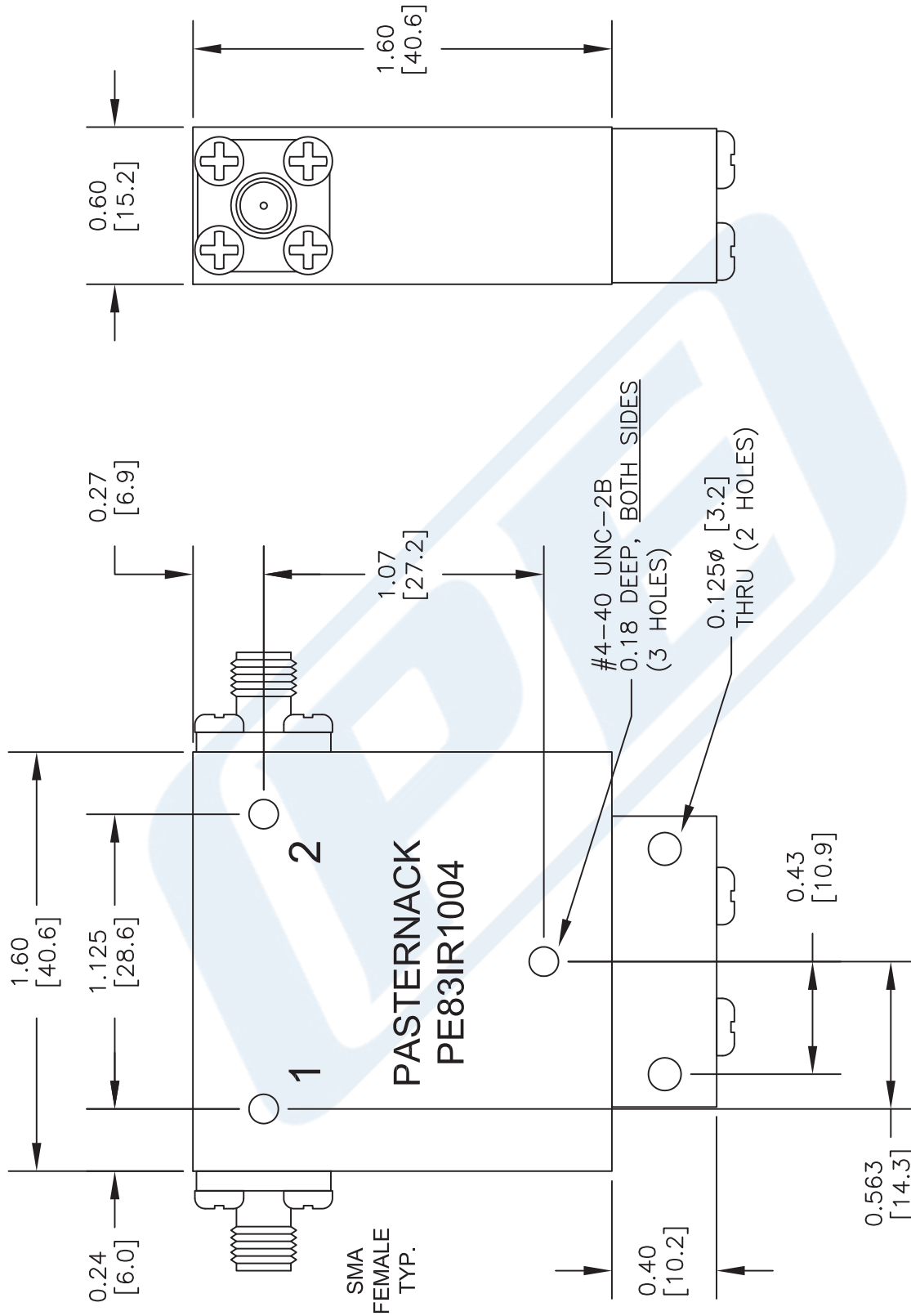
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [High Power Isolator with 20 dB Isolation from 2 GHz to 4 GHz, 100 Watts and SMA Female PE83IR1004](https://www.pasternack.com/high-power-isolator-20db-isolation-4-ghz-100-watts-sma-female-pe83ir1004-p.aspx)

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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE83IR1004 CAD Drawing

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DWG TITLE

PE83IR1004

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

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CAD FILE 012616

SCALE N/A

SIZE A

2233