



WR-90 Waveguide Isolator from 8.2 GHz to 12.4 GHz,
18 dB min Isolation, Cover Flange, Aluminum

Waveguide Isolators Technical Data Sheet

PE-W90IR001

Features

- WR-90 Waveguide Isolator
- X Band Frequency Range 8.2 to 12.4 GHz
- UG Cover Flange Configuration
- Maximum VSWR 1.35:1
- Minimum 18 dB isolation
- Maximum Forward Power 100 W (CW)

Applications

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

Description

The PE-W90IR001 is a Waveguide Isolator offering 18 dB minimum isolation over the X band frequency range of 8.2 to 12.4 GHz. The design achieves high isolation with wide band performance and the WR-90 waveguide uses UG Square Cover compatible flanges on all ports and has a power rating of 100 watts (CW).

Pasternack offers a wide variety of isolators and waveguide 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 waveguide isolators feature excellent insertion loss, full WR band high isolation and reliability.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	8.2		12.4	GHz
Insertion Loss			0.3	dB
Isolation	18			dB
VSWR			1.35:1	
Forward Power (CW)			100	Watts
Forward Power (Peak)			3	kWatts
Reverse Power (CW)			10	Watts
Reverse Power (Peak)			300	Watts

Mechanical Specifications

Size	
Length	4.13 in [104.9 mm]
Width	1.97 in [50.04 mm]
Height	1.63 in [41.4 mm]
Weight	0.3 lbs [136.08 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Waveguide Isolator from 8.2 GHz to 12.4 GHz, 18 dB min Isolation, Cover Flange, Aluminum PE-W90IR001](#)



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Configuration

Waveguide Size

WR-90

Flange Type

Cover

Body Material and Plating

Aluminum, Chromate

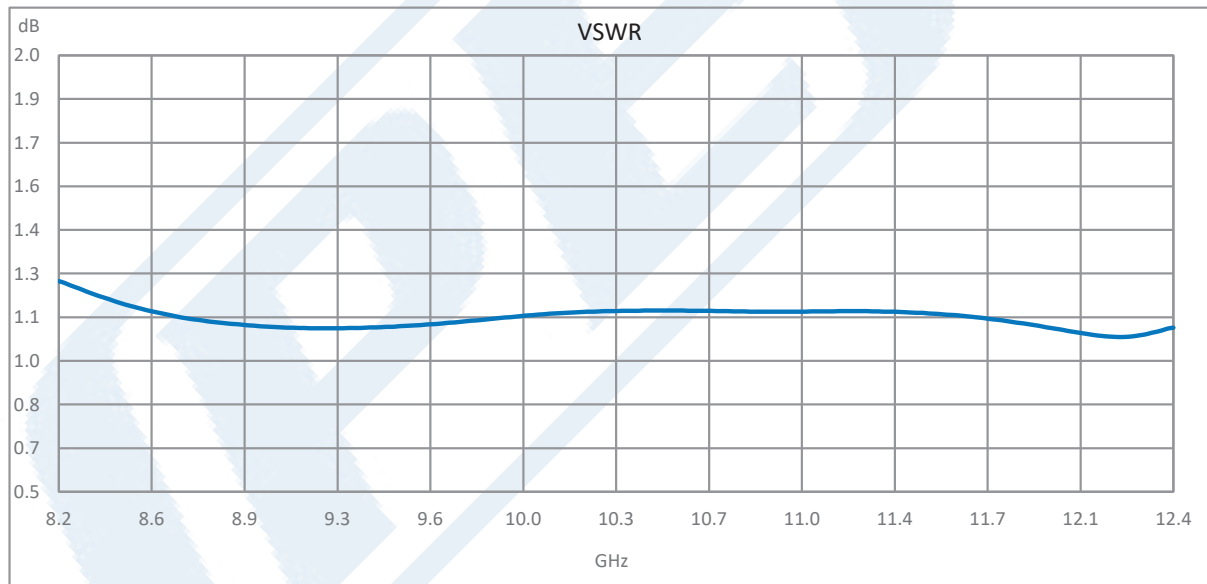
Environmental Specifications

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

Plotted and Other Data

Notes:

Typical Performance Data



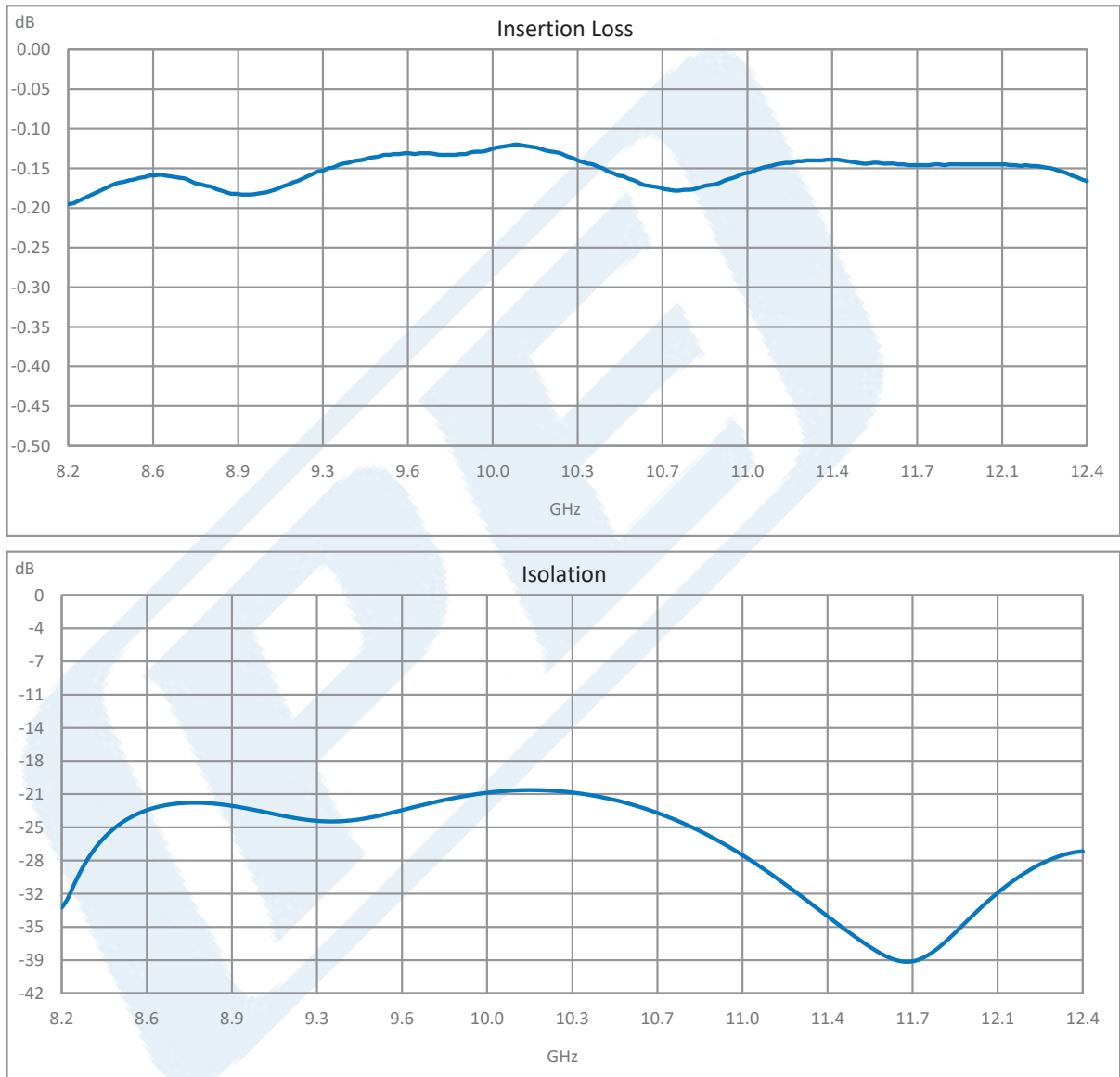
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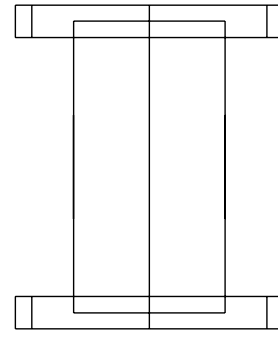
WR-90 Waveguide Isolator from 8.2 GHz to 12.4 GHz, 18 dB min Isolation, Cover Flange, Aluminum from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Waveguide Isolator from 8.2 GHz to 12.4 GHz, 18 dB min Isolation, Cover Flange, Aluminum PE-W90IR001](https://www.pasternack.com/wr90-waveguide-isolator-12.4ghz-18db-pe-w90ir001-p.aspx)

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Technical drawing of a PCB assembly showing dimensions and component placement. The drawing includes a top view and a side view. Dimensions are provided in inches and millimeters.

Top View Dimensions:

- Overall width: 1.97 [50.0]
- Overall height: 4.13 [105.0]
- Distance from left edge to center of circular feature: 1.575 [40.00]
- Distance from right edge to center of circular feature: 1.575 [40.00]
- Distance from top edge to center of circular feature: 1.97 [50.0]
- Distance from bottom edge to center of circular feature: 1.97 [50.0]
- Distance from left edge to center of circular feature: 1.97 [50.0]
- Distance from right edge to center of circular feature: 1.97 [50.0]

Component Placement:

- 2X FBP100/UG C (THREADED HOLE) - Two components are shown, one on the left and one on the right, with arrows pointing to their respective locations.

Side View:

- Shows the profile of the PCB assembly, including the thickness of the board and the height of the components.

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