

WR-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz,
18 dB min Isolation, Cover Flange, Aluminum

Waveguide Isolators Technical Data Sheet

PE-W42IR001

Features

- WR-42 Waveguide Isolator
- K Band Frequency Range 17.6 to 26.7 GHz
- UG Cover Flange Configuration
- Maximum VSWR 1.3:1
- Minimum 18 dB isolation
- Maximum Forward Power 30 W (CW)

Applications

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

Description

The PE-W42IR001 is a Waveguide Isolator offering 18 dB minimum isolation over the K band frequency range of 17.6 to 26.7 GHz. The design achieves high isolation with wide band performance and the WR-42 waveguide uses UG Square Cover compatible flanges on all ports and has a power rating of 30 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.

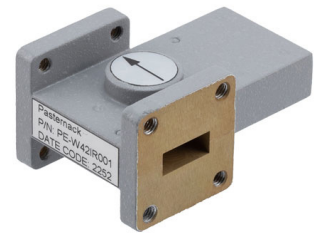
Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	17.6		26.7	GHz
Insertion Loss			0.3	dB
Isolation	18			dB
VSWR			1.3:1	
Forward Power (CW)			30	Watts
Forward Power (Peak)			500	Watts
Reverse Power (CW)			3	Watts
Reverse Power (Peak)			50	Watts

Mechanical Specifications

Size	
Length	1.97 in [50.04 mm]
Width	1.18 in [29.97 mm]
Height	0.88 in [22.35 mm]
Weight	0.2 lbs [90.72 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz, 18 dB min Isolation, Cover Flange, Aluminum PE-W42IR001](#)



WR-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz,
18 dB min Isolation, Cover Flange, Aluminum

Waveguide Isolators Technical Data Sheet

PE-W42IR001

Configuration

Waveguide Size

WR-42

Flange Type

Cover

Body Material and Plating

Aluminum, Chromate

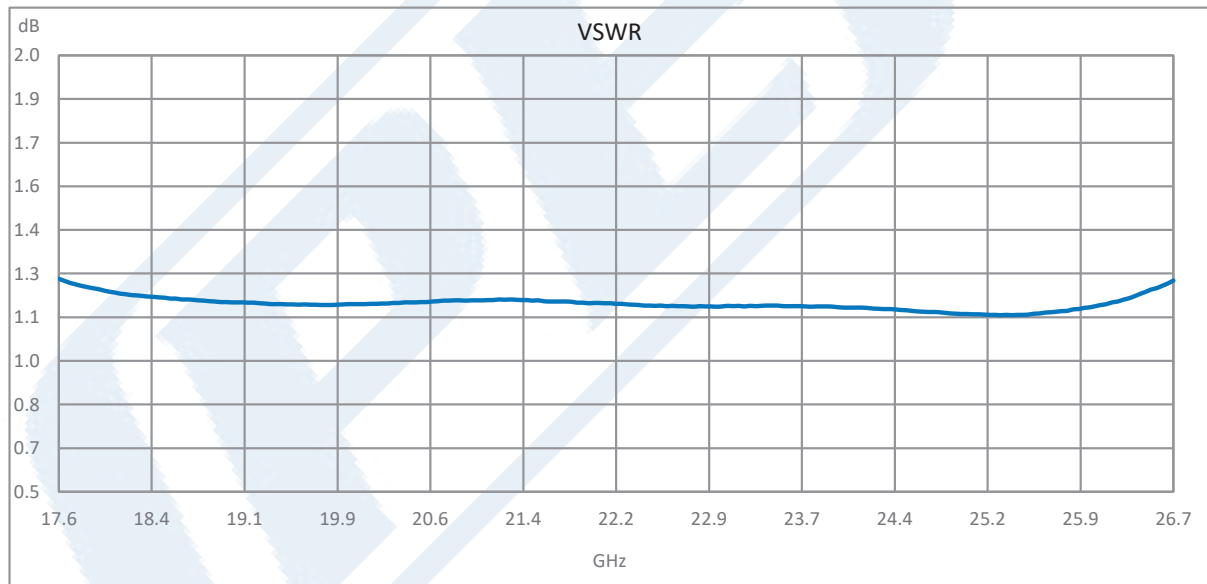
Environmental Specifications

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

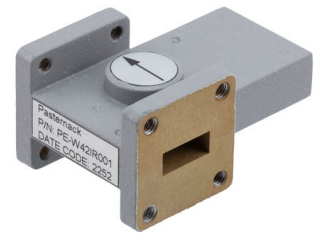
Plotted and Other Data

Notes:

Typical Performance Data



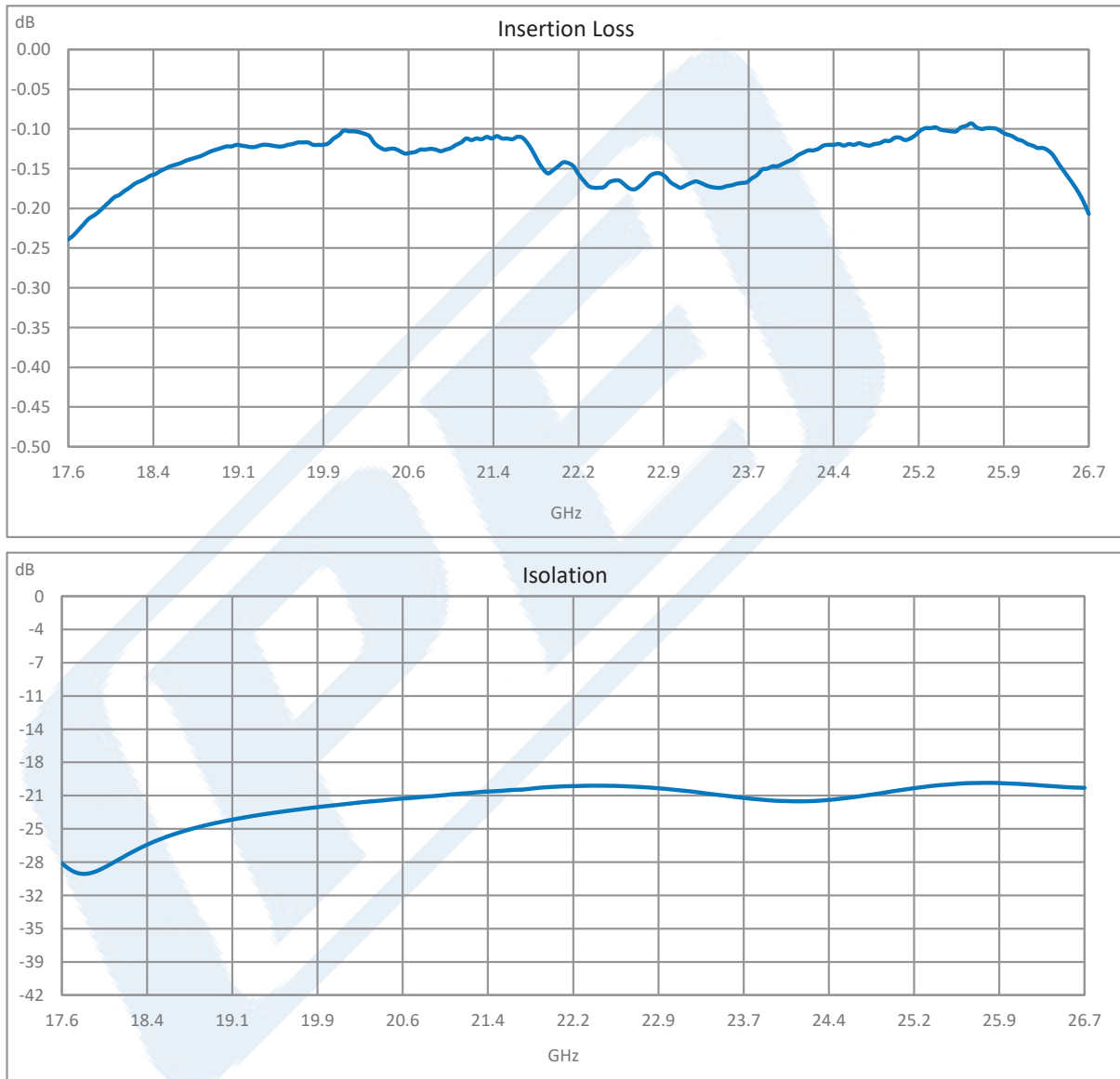
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz, 18 dB min Isolation, Cover Flange, Aluminum PE-W42IR001](#)



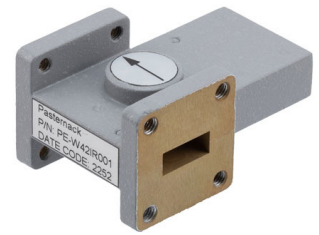
WR-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz,
18 dB min Isolation, Cover Flange, Aluminum

Waveguide Isolators Technical Data Sheet

PE-W42IR001



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz, 18 dB min Isolation, Cover Flange, Aluminum PE-W42IR001](#)



WR-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz,
18 dB min Isolation, Cover Flange, Aluminum

Waveguide Isolators Technical Data Sheet

PE-W42IR001

WR-42 Waveguide Isolator from 17.6 GHz to 26.7 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-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz, 18 dB min Isolation, Cover Flange, Aluminum PE-W42IR001](https://www.pasternack.com/wr42-waveguide-isolator-26.7ghz-18db-pe-w42ir001-p.aspx)

URL: <https://www.pasternack.com/wr42-waveguide-isolator-26.7ghz-18db-pe-w42ir001-p.aspx>

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.

PE-W42IR001 CAD Drawing

WR-42 Waveguide Isolator from 17.6 GHz to 26.7 GHz, 18 dB min Isolation, Cover Flange, Aluminum

F

E

D

C

B

A

F

E

D

C

B

A

1

2

3

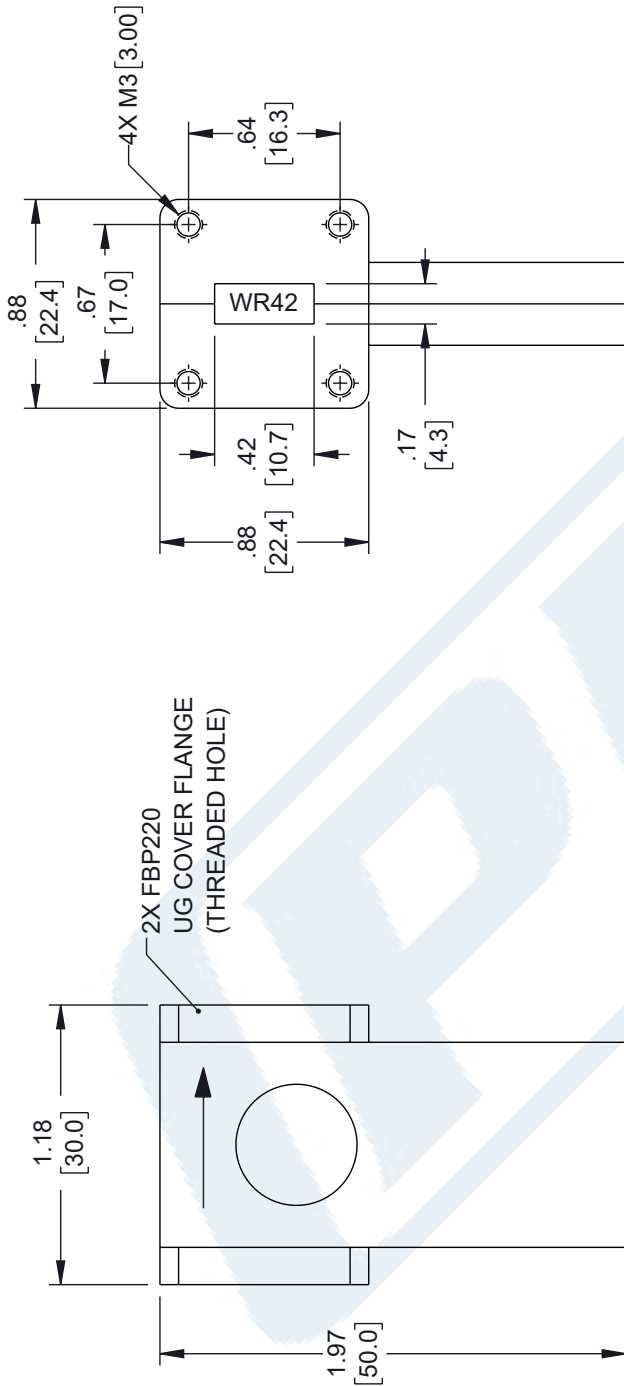
4

5

6

REVISION

ZONE	REV	DESCRIPTION	DATE	CHANGED BY	APPROVED
	A	INITIAL RELEASE	02/23/2023	DMAY	SPONG



UNLESS OTHERWISE SPECIFIED
LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

X = ±.2 [5] FRACTIONS
.XX = ±.02 [.5] ±.1/32
.XXX = ±.005 [.13] ANGLES ± 1°

CABLE LENGTH TOLERANCES:

≤12 [305] = ±1 [25] / -0
>12 [305] ≤ 60 [1524] = +2 [51] / -0
>60 [1524] ≤ 120 [3048] = +4 [102] / -0
>120 [3048] ≤ 300 [7620] = +6 [152] / -0
>300 [7620] = +5% / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY
AND SUBJECT TO CHANGE WITHOUT NOTICE



Website: www.Pasternack.com
Phone: 1.866.727.8376 | 1.949.261.1920

DESCRIPTION
WR-42 WAVEGUIDE ISOLATOR, 17.6~26.7GHz



INTERPRET ALL DIMENSIONS AND
TOLERANCES PER ASME Y14.5
SCALE NONE
SHEET 1 OF 1

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN
PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED.
THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE
EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

T-Rev.D2