



WR-22 Waveguide Isolator from 33 GHz to 50 GHz,  
25 dB Isolation, UG-383/U Round Cover Flange

## Waveguide Isolators Technical Data Sheet

**PEWIR1004A**

### Features

- Waveguide Faraday Isolator
- WR-22
- Full Q Band Frequency Range 33 to 50 GHz
- UG-383/U Round Cover Flange
- 1.3:1 VSWR

### Applications

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

### Description

The PEWIR1004A is a Waveguide Faraday Isolator offering 25 dB isolation over the full Q band frequency range of 33 to 50 GHz. In a conventional isolator design, three or four parts would be needed to cover the full WR-22 band to achieve this level of isolation. The Faraday design achieves high isolation with wide band performance. This gold plated WR-22 waveguide component uses UG-383/U round cover flanges on all ports and has a power rating of 1.5 watts in the forward direction.

Pasternack Enterprises 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	33		50	GHz
Insertion Loss		1.3		dB
Isolation		25		dB
VSWR		1.3:1		
Forward Power (CW)			1.5	Watts

### Mechanical Specifications

<b>Size</b>	
Length	2.79 in [70.87 mm]
Width	1.239 in [31.47 mm]
Height	1.239 in [31.47 mm]
Weight	0.163 lbs [73.94 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-22 Waveguide Isolator from 33 GHz to 50 GHz, 25 dB Isolation, UG-383/U Round Cover Flange PEWIR1004A](#)



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### Configuration

Waveguide Size	WR-22
Flange Designation	UG-383/U
Flange Type	Round Cover
Body Material and Plating	Brass, Gold

### Environmental Specifications

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

### Plotted and Other Data

Notes:

WR-22 Waveguide Isolator from 33 GHz to 50 GHz, 25 dB Isolation, UG-383/U Round Cover Flange 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-22 Waveguide Isolator from 33 GHz to 50 GHz, 25 dB Isolation, UG-383/U Round Cover Flange PEWIR1004A](#)

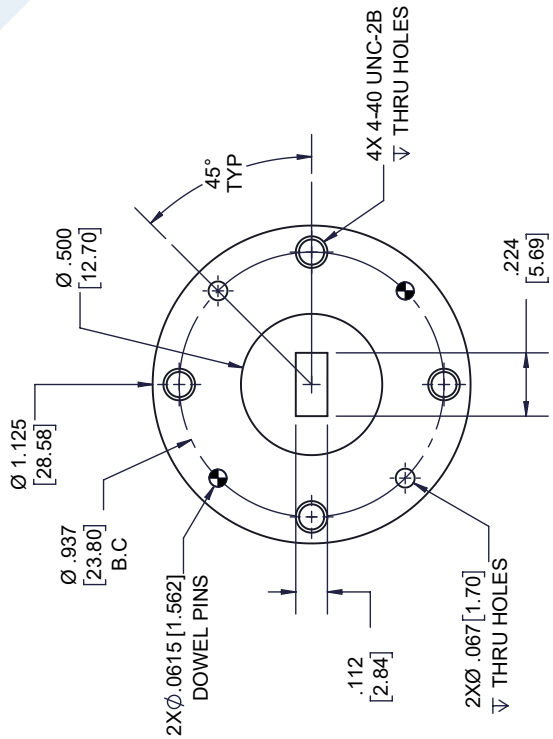
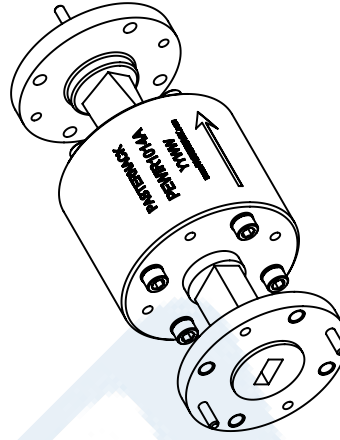
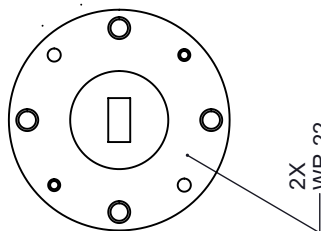
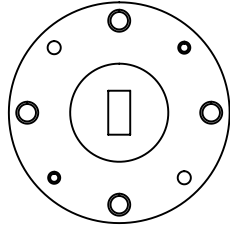
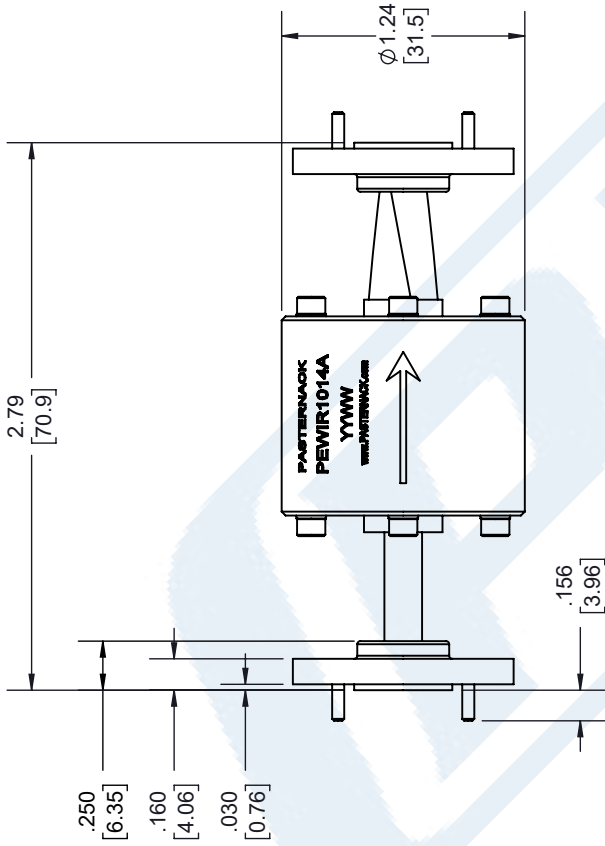
URL: <https://www.pasternack.com/wr22-waveguide-isolator-50ghz-25db-ug383-pewir1004a-p.aspx>

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.

# PEWIR1004A CAD Drawing

WR-22 Waveguide Isolator from 33 GHz to 50 GHz, 25 dB Isolation, UG-383/U Round Cover Flange

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	08/30/2022	S. PONG



### FLANGE DETAIL

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

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS ±.1/32  
 .XX = ±.02 [ .51] ±.1/32  
 .XXX = ±.005 [ .13] ANGLES ± 1°

CABLE LENGTH (L), TOLERANCES:

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

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SCALE N/A

REV A

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SIZE A

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DRAWN BY K.DANG

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