



8.2 to 12.4 GHz Orthomode Transducer, 45 dB Isolation, 30 dB
Cross Polarization, 0.900" x 0.900" Square Waveguide

TECHNICAL DATA SHEET

PEWOT0014

Pasternack's PEWOT0014 is a WR-90 orthomode transducer (OMT) operating across a frequency range from 8.2 GHz to 12.4 GHz. The OMT separates a circular or elliptical polarized waveform into two linear orthogonal waveforms or combines two linear polarized waveforms into one circular or elliptical polarized waveform or vice versa. The OMT is configured with a 0.900" x 0.900" square waveguide for the antenna port and two WR-90 waveguides for the horizontal and vertical ports. All ports have standard UG-39/U flanges.

Features

- X Band Orthomode Transducer
- Frequency Range: 8.2 GHz to 12.4 GHz
- Full Waveguide Band Operation
- High Port Isolation
- High Crosspol Rejection
- Low Insertion Loss

Applications

- Radar Systems
- Antenna Ranges
- Waveform Polarization Separation and Combination
- Communication Systems

Product Configuration

Design
Application Band

Orthomode Transducer
X

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	8.2		12.4	GHz
Isolation		45		dB
Cross Polarization		30		dB
Return Loss		17		dB
Vertical Insertion Loss		0.3		dB
Horizontal Insertion Loss		0.3		dB

Mechanical Specifications

Antenna Port	0.900" x 0.900" Square Waveguide
Waveguide Size (Horizontal & Vertical Ports)	WR-90
Flange Type	UG-39/U All ports
Material	Aluminum
Plating	Gold
Size	
Length	5 in [127 mm]
Width	3.5 in [88.9 mm]
Height	1.63 in [41.4 mm]
Weight	2.28 lbs [1.03 kg]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [8.2 to 12.4 GHz Orthomode Transducer, 45 dB Isolation, 30 dB Cross Polarization, 0.900" x 0.900" Square Waveguide PEWOT0014](#)



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Environmental Specifications

Temperature

Operating Range

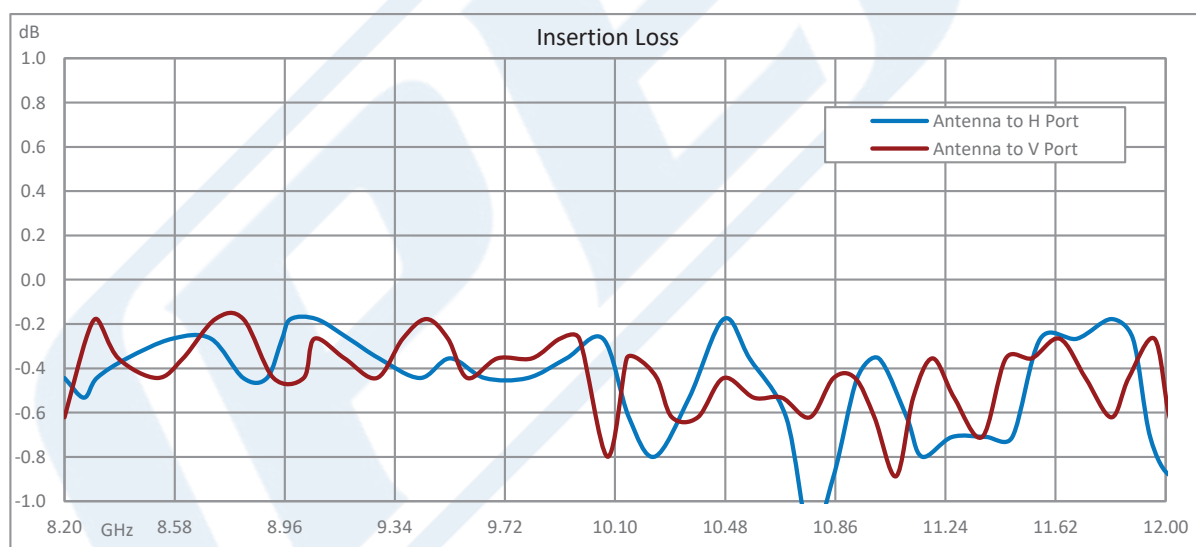
-40 to +85 deg C

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

Plotted and Other Data

Notes:

- Values at +25 °C, sea level



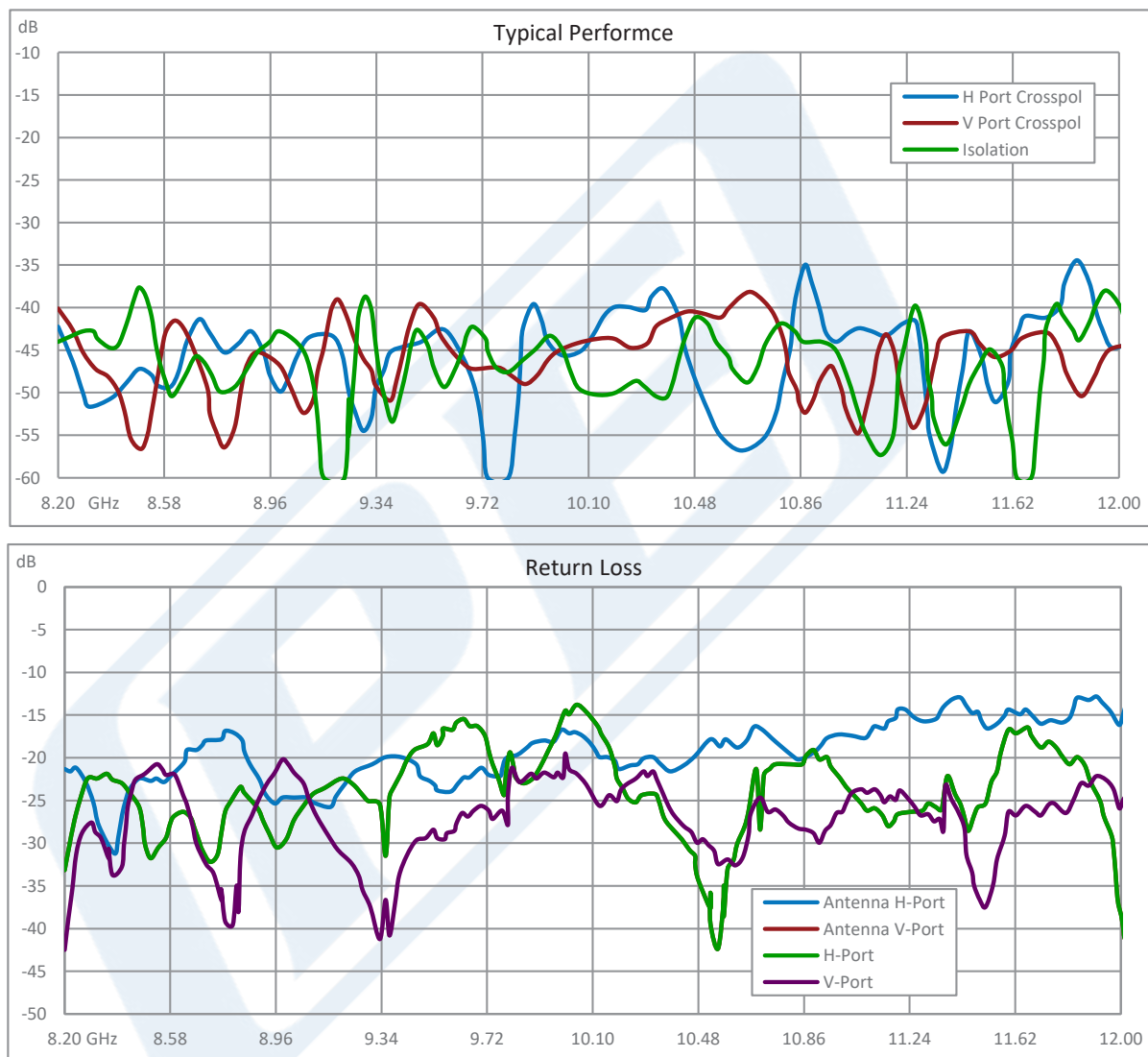
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8.2 to 12.4 GHz Orthomode Transducer, 45 dB Isolation, 30 dB Cross Polarization, 0.900" x 0.900" Square Waveguide from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products 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: [8.2 to 12.4 GHz Orthomode Transducer, 45 dB Isolation, 30 dB Cross Polarization, 0.900" x 0.900" Square Waveguide PEWOT0014](https://www.pasternack.com/pewot0014-p.aspx)

URL: <https://www.pasternack.com/pewot0014-p.aspx>

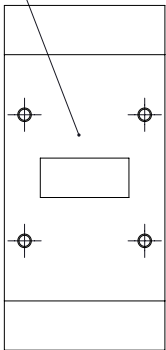
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such 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.

PEWOT0014 CAD Drawing

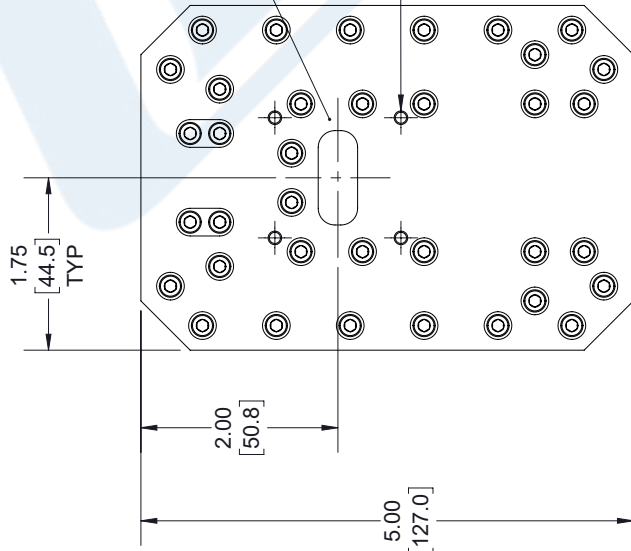
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	1/28/2020	M.MILLER

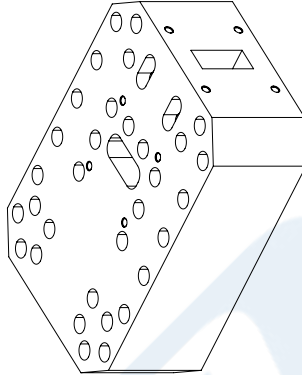
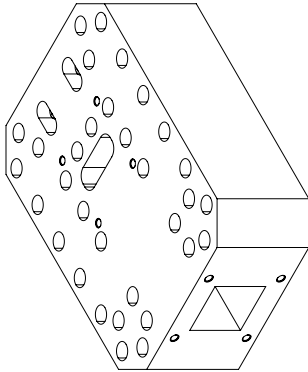
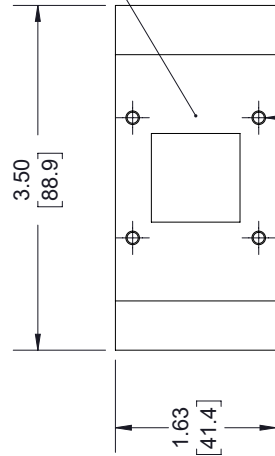
WR-90 WAVEGUIDE
UG-39/U COMPATIBLE FLANGE
(H PORT)



WR-90 WAVEGUIDE
UG-39/U COMPATIBLE FLANGE
(V PORT)



.900 [22.86] SQUARE WAVEGUIDE
UG-39/U COMPATIBLE FLANGE
(ANTENNA PORT)



LABEL:

PASTERNAK
PEWOT0014
D/C: YYWW

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

TOLERANCES:

.X = ± .2	[.08]	FRACTIONS
.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% L / -0

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.

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SHEET 1 OF 1

SCALE N/A

SIZE	CAGE CODE	DRAWN BY	ITEM NO
A	53919	K.DANG	PEWOT0014
REV	A		