



WR-10 Waveguide Power Detector, W Band, 75 GHz to 110 GHz, Positive Output Voltage Polarity, UG-387/U-M Flange

TECHNICAL DATA SHEET

PE80T3012

The PE80T3012 is a WR-10 Waveguide Power Detector, operating across the W Band from 75 GHz to 110 GHz. This 50 Ohm design features Positive Output Voltage Polarity. Impressive typical performance includes Video Sensitivity of 800 mV/mW with +/- 2dB flatness, Input Dynamic Range of -55 dBm to +10 dBm, and Detection Speed Rise Time of 5 nsec. Maximum input power handling is +17 dBm. The rugged and small size Brass package design is gold plated and supports a UG-387/U-M waveguide flange pattern at RF input and output ports. The DC output port uses an SMA Female connector. The module operates across a temperature range from 0°C to +50°C.

Features

- WR-10 Waveguide Power Detector
- 75 GHz to 110 GHz
- W Band
- Positive Output Voltage Polarity
- Voltage Sensitivity 800 mV/mW
- Sensitivity Flatness +/- 2dB typ
- Input Dynamic Range -55 dBm to +10 dBm
- Detection Speed Rise Time 5 nsec typ
- Max RF Input Power +17 dBm
- 50 Ohm Design
- RF Input and Output Waveguide Flange UG-387/U-M
- SMA Female DC Output Port
- Operational Temperature Range -0°C to +50°C
- Rugged and Compact Brass Gold Plated Package Design

Applications

- Test & Measurement
- Military & Commercial Communications
- Military Electronic Systems
- Research & Development

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	75		110	GHz
Voltage Sensitivity		800		mV/mW
RF Input Power			+17	dBm
Tangential Sensitivity		-50		dBm
Sensitivity Flatness		±2		dB
Dynamic Range	-55		+10	dBm
Output Voltage Polarity		Positive		
RF Input Power for Square Law Region			-20	dBm
Detection Speed, Rise Time		5		ns

Mechanical Specifications

Temperature

Operating Range 0 to +50 deg C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-10 Waveguide Power Detector, W Band, 75 GHz to 110 GHz, Positive Output Voltage Polarity, UG-387/U-M Flange PE80T3012](#)



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Size

Length	1.104 in [28.04 mm]
Width	0.89 in [22.61 mm]
Height	1.114 in [28.3 mm]
Weight	0.05 lbs [22.68 g]

Waveguide Size	WR-10
Flange Destination	UG-387/U-M
Flange Type	Round Cover
DC Connector	SMA Female
Material and Plating	Brass, Gold

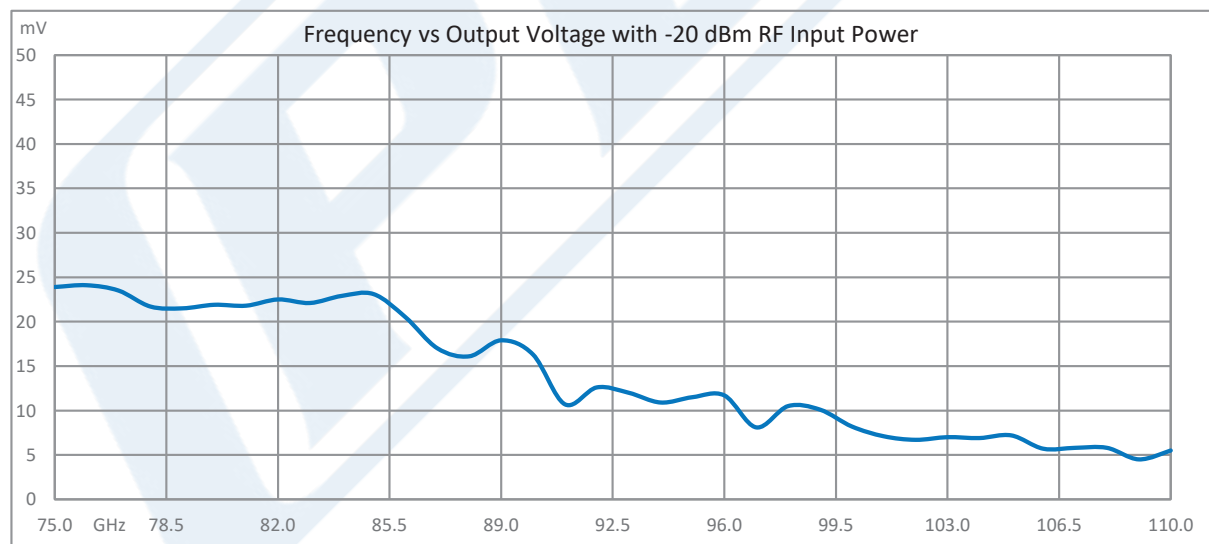
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

Typical Performance Data



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WR-10 Waveguide Power Detector, W Band, 75 GHz to 110 GHz, Positive Output Voltage Polarity, UG-387/U-M 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-10 Waveguide Power Detector, W Band, 75 GHz to 110 GHz, Positive Output Voltage Polarity, UG-387/U-M Flange PE80T3012](https://www.pasternack.com/waveguide-detector-wr10-positive-75-110-ghz-pe80t3012-p.aspx)

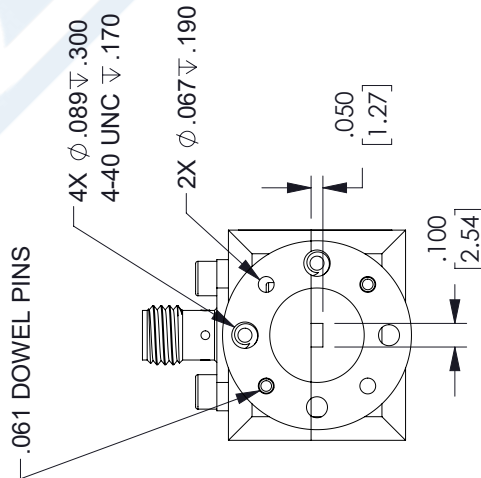
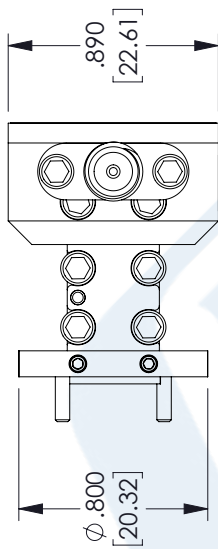
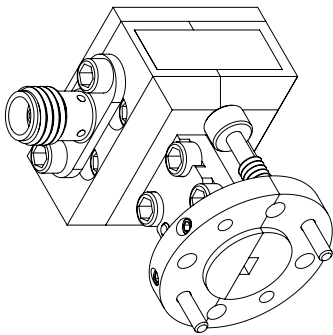
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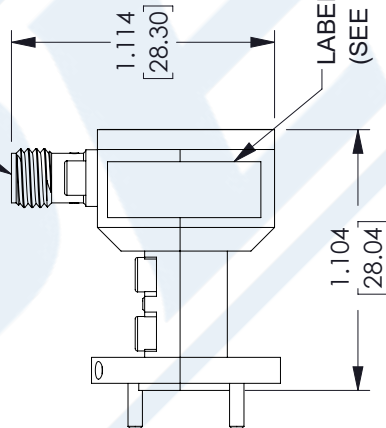
PE80T3012 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	8/16/2022	TGALLA

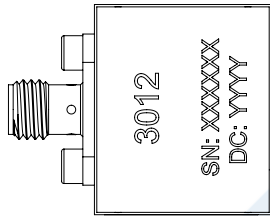


SMA



LABEL PER ILS-100-03
(SEE NOTE #2)

UG-387/U-M



SEE NOTE #3

NOTES:

1. MATERIAL: 1/2 HARD BRASS
2. LABEL PER ILS-100-03. FOR INTERNAL REFERENCE ONLY.
LABEL LOCATION FOR REFERENCE ONLY.
3. SERIAL NUMBER AND DATE CODE EX: SN: FXZYDY, DC: 2232

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
.X = ± .2	[.508]
.XX = ± .02	[.51]
.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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SCALE	N/A
REV	A

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