



WR-12 Waveguide Power Detector, E Band, 60 GHz to 90 GHz, Positive Output Voltage Polarity, UG-387/U Flange

TECHNICAL DATA SHEET

PE80T3011

The PE80T3011 is a WR-12 Waveguide Power Detector, operating across the E Band from 60 GHz to 90 GHz. This 50 Ohm design features Positive Output Voltage Polarity. Impressive typical performance includes Video Sensitivity of 800 mV/mW with +/- 2dB flatness, Tangential Sensitivity of -50 dBm, 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 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-12 Waveguide Power Detector
- 60 GHz to 90 GHz
- Ka Band
- Positive Output Voltage Polarity
- Voltage Sensitivity 800 mV/mW
- Sensitivity Flatness +/- 2dB typ
- Tangential Sensitivity -50 dBm 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
- 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	60		90	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
Video Bandwidth		>1		GHz
RF Input Power applied for testing		-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: [E Band WR-15 Waveguide Power Detector, V Band, 50 GHz to 75 GHz, Positive Output Voltage Polarity, UG-385/U Flange PE80T3011](#)



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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-12
Flange Destination	UG-387/U
Flange Type	Round Cover
DC Connector	SMA Female
Material and Plating	Brass, Gold

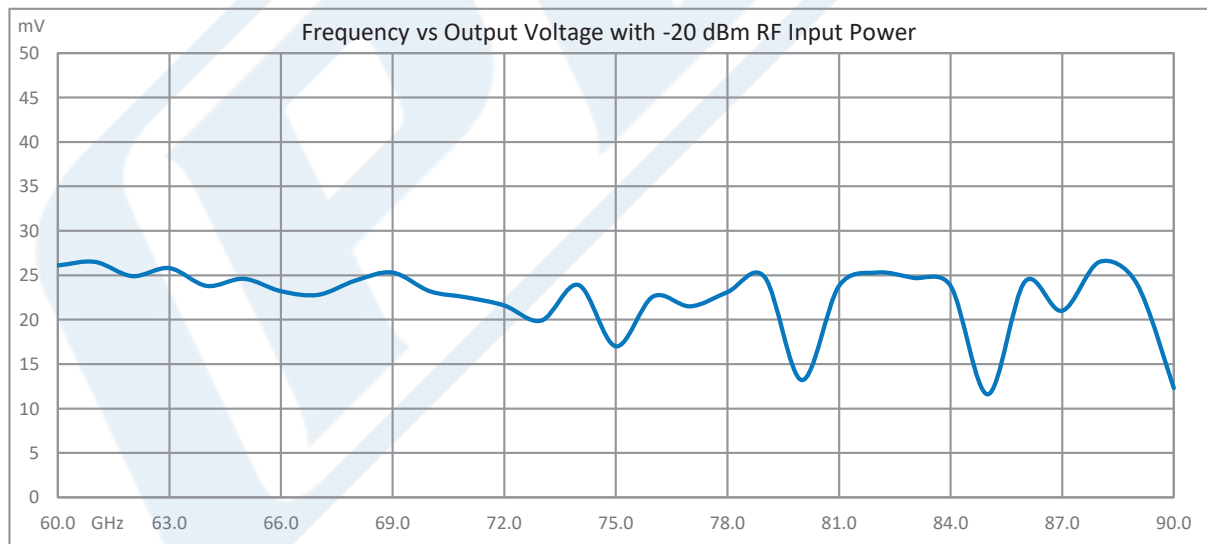
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

Typical Performance Data



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WR-12 Waveguide Power Detector, E Band, 60 GHz to 90 GHz, Positive Output Voltage Polarity, UG-387/U 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: [E Band WR-15 Waveguide Power Detector, V Band, 50 GHz to 75 GHz, Positive Output Voltage Polarity, UG-385/U Flange PE80T3011](#)

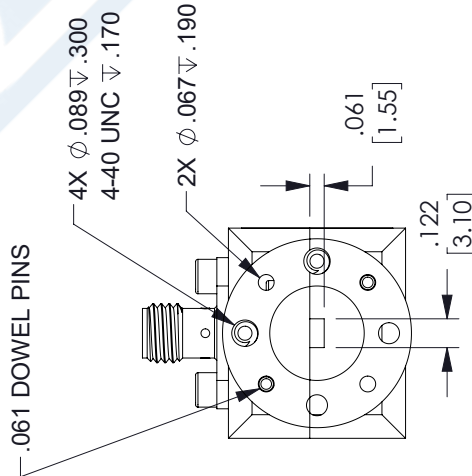
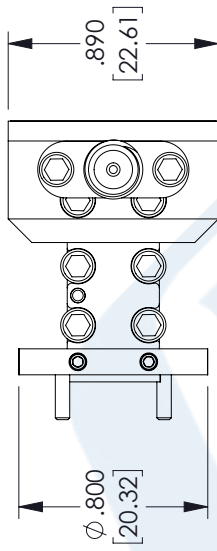
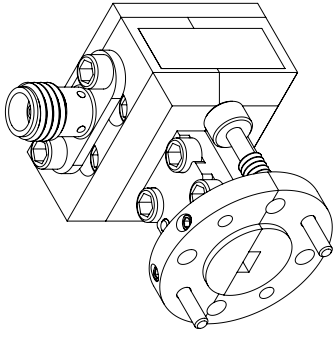
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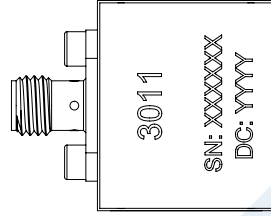
PE80T3011 CAD Drawing

WR-12 Waveguide Power Detector, E Band, 60 GHz to 90 GHz,
Positive Output Voltage Polarity, UG-387/U Flange

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	8/16/2022	T GALLA

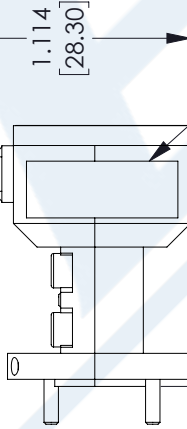


SMA



SEE NOTE #3

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



UG-387/U

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: 5XZY2U, DC: 2232

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

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

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SCALE N/A



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ITEM NO. PE80T3011

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