

## WR-28 Waveguide Power Detector, Ka Band, 26.5 GHz to 40 GHz, Positive Output Voltage Polarity, UG-599/U Flange

### TECHNICAL DATA SHEET

**PE80T3007**

The PE80T3007 is a WR-28 Waveguide Power Detector, operating across the Ka Band from 26.5 GHz to 40 GHz. This 50 Ohm design features Positive Output Voltage Polarity. Impressive typical performance includes Video Sensitivity of 1500 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-599/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-28 Waveguide Power Detector
- 26.5 GHz to 40 GHz
- Ka Band
- Positive Output Voltage Polarity
- Voltage Sensitivity 1500 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-599/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

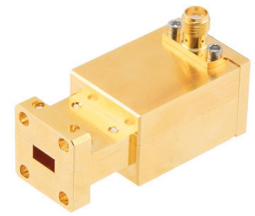
Description	Minimum	Typical	Maximum	Units
Frequency Range	26.5		40	GHz
Voltage Sensitivity		1,500		mV/mW
RF Input Power			+17	dBm
Tangential Sensitivity		-50		dBm
Sensitivity Flatness		±2		dB
Dynamic Range	-55		+10	dBm
Output Voltage Polarity		Positive		
RF Input Power for Square Law Region			-20	dBm
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: [Ka Band WR-28 Waveguide Power Detector, 26.5 GHz to 40 GHz, Positive Output Voltage Polarity, UG-599/U Flange PE80T3007](#)



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**TECHNICAL DATA SHEET**

**PE80T3007**

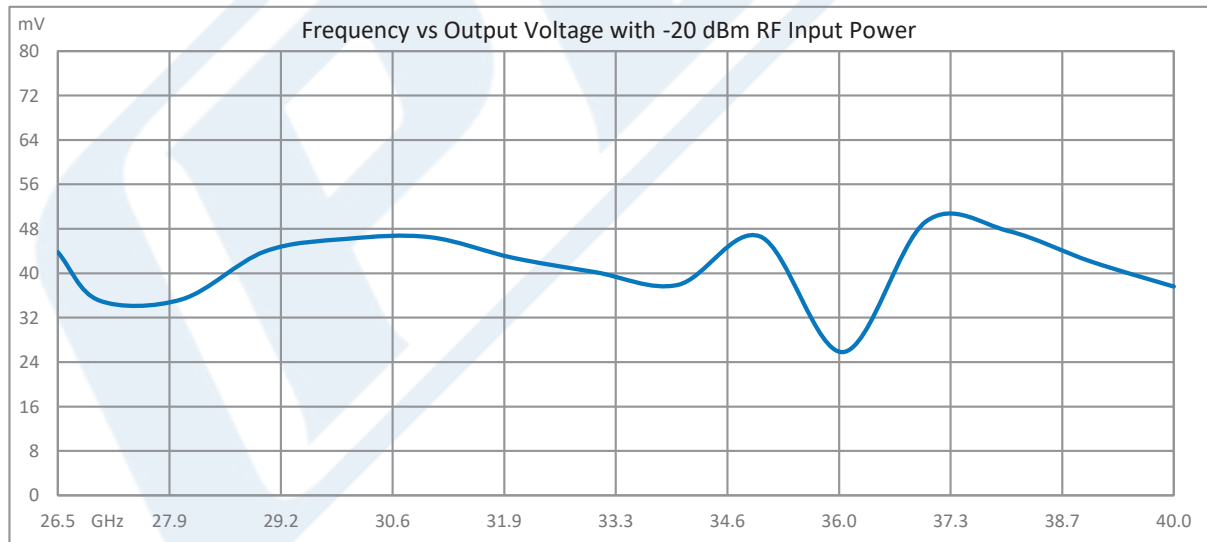
<b>Size</b>	
Length	1.894 in [48.11 mm]
Width	0.89 in [22.61 mm]
Height	1.114 in [28.3 mm]
Weight	0.05 lbs [22.68 g]
Waveguide Size	WR-28
Flange Destination	UG-599/U
Flange Type	Square Cover
DC Connector	SMA Female
Material and Plating	Brass, Gold

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

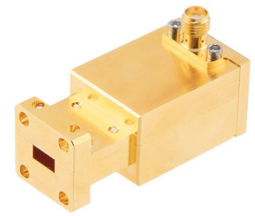
**Plotted and Other Data**

- Notes:
- Values at +25 °C, sea level

**Typical Performance Data**



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## TECHNICAL DATA SHEET

**PE80T3007**

WR-28 Waveguide Power Detector, Ka Band, 26.5 GHz to 40 GHz, Positive Output Voltage Polarity, UG-599/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: [Ka Band WR-28 Waveguide Power Detector, 26.5 GHz to 40 GHz, Positive Output Voltage Polarity, UG-599/U Flange PE80T3007](https://www.pasternack.com/waveguide-detector-wr28-positive-26.5-40-ghz-pe80t3007-p.aspx)

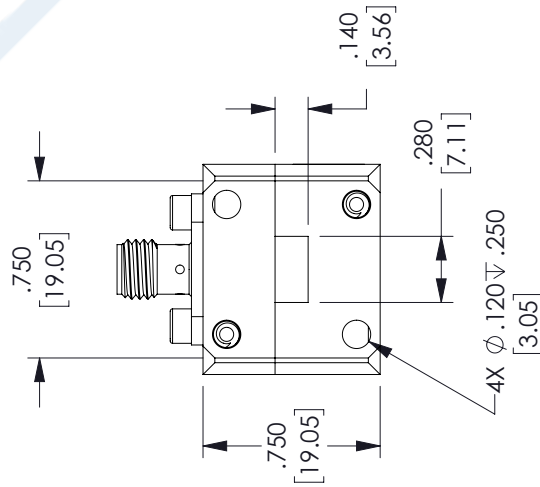
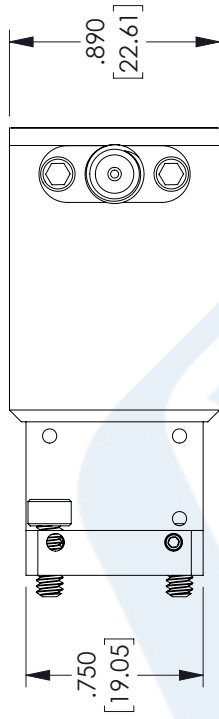
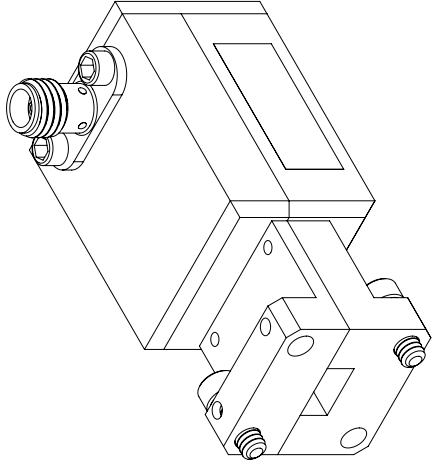
URL: <https://www.pasternack.com/waveguide-detector-wr28-positive-26.5-40-ghz-pe80t3007-p.aspx>

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.

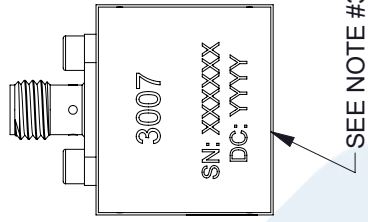
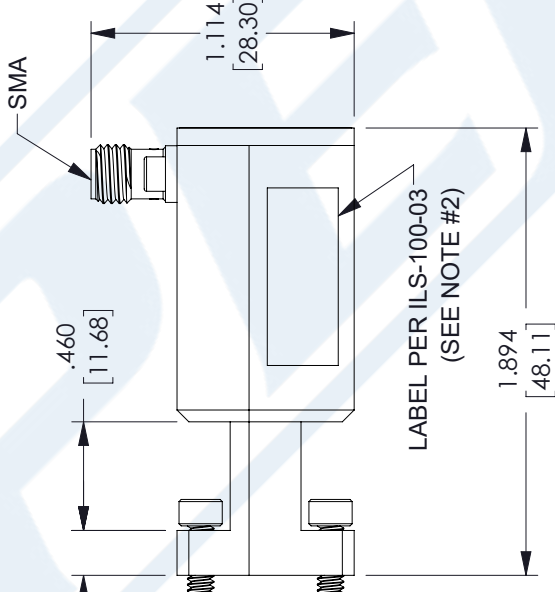
# PE80T3007 CAD Drawing

WR-28 Waveguide Power Detector, Ka Band, 26.5 GHz to 40 GHz,  
Positive Output Voltage Polarity, UG-599/U Flange

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	08/15/2022	TGALLA



UG-599/U



**NOTES:**

1. MATERIAL: 6061 T6 ALUMINIUM.
2. LABEL PER ILS-100-03 (FOR INTERNAL REFERENCE ONLY)  
LABEL LOCATION FOR REFERENCE ONLY.
3. SERIAL NUMBER AND DATE CODE EX: SN: 0WZYQD, DC: 2232

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

TOLERANCES:

.X = ±.2	[5.08]	FRACTIONS
.XX = ±.02	[.51]	±.132
.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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ITEM NO. PE80T3007  
CAGE CODE 53919  
DRAWN BY DMAY  
SCALE N/A  
SHEET 1 OF 1

THIRD-ANGLE PROJECTION

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