



WR-19 Waveguide Power Detector, U Band, 40 GHz to 60 GHz,
Positive Output Voltage Polarity, UG-383/U-M Flange

TECHNICAL DATA SHEET

PE80T3009

The PE80T3009 is a WR-19 Waveguide Power Detector, operating across the U Band from 40 GHz to 60 GHz. This 50 Ohm design features Positive Output Voltage Polarity. Impressive typical performance includes Video Sensitivity of 1100 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-383/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-19 Waveguide Power Detector
- 40 GHz to 60 GHz
- U Band
- Positive Output Voltage Polarity
- Voltage Sensitivity 1100 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-383/U-M
- SMA Female DC Output Port
- Operational Temperature Range -0°C to +50°C
- Rugged and Compact Brass Gold Plated Package Design

Applications

- Military & Space
- R&D Labs
- Communicatoin Systems
- Radar Systems
- Microwave Radio Systems
- RF Wideband Front Ends
- Test Instrumentation

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	40		60	GHz
Voltage Sensitivity		1,100		mV/mW
RF Input Power			-20	dBm
Tangential Sensitivity		-50		dBm
Sensitivity Flatness		±1.5		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: [U Band WR-19 Waveguide Power Detector, U Band, 40 GHz to 60 GHz, Positive Output Voltage Polarity, UG-383/U-M Flange PE80T3009](#)



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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-19
Flange Destination	UG-383/U-M
Flange Type	Round Cover
DC Connector	SMA Female
Material and Plating	Brass, Gold

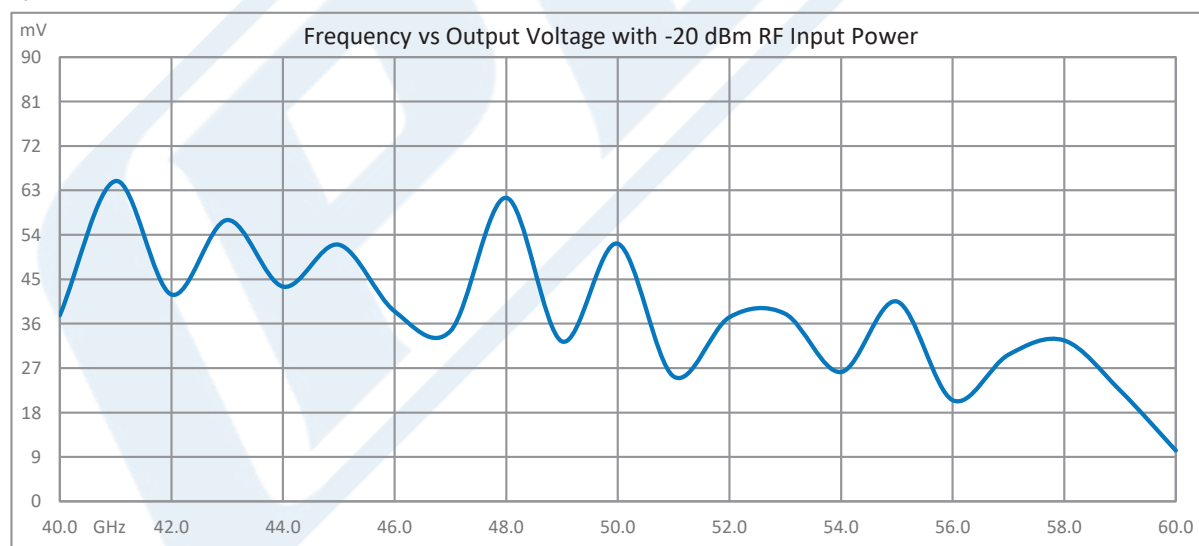
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

Typical Performance Data



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WR-19 Waveguide Power Detector, U Band, 40 GHz to 60 GHz, Positive Output Voltage Polarity, UG-383/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.

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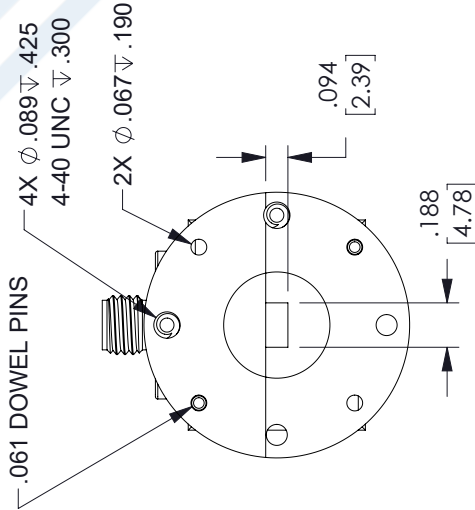
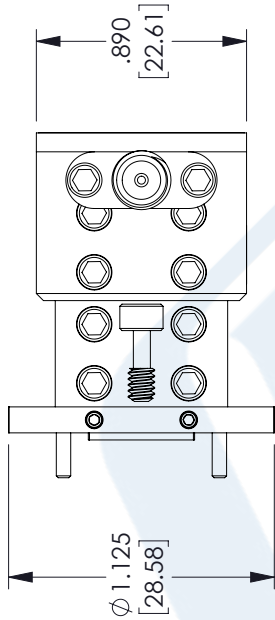
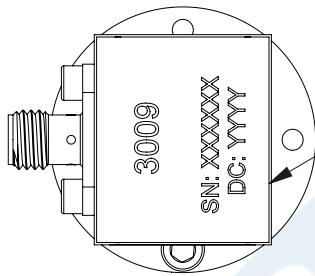
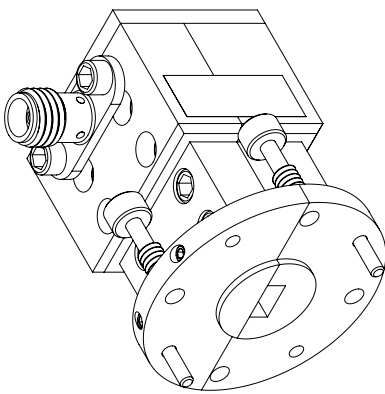
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PE80T3009 CAD Drawing

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



NOTES:

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

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE IN INCHES DIMENSIONS IN [] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
.X = ± .2	[.08]
.XX = ± .02	[.51]
.XXX = ± .005	[.13]
CABLE LENGTH (L) TOLERANCES:	ANGLES ± 1°
L ≤ 12 [305]	± 1/32
12 [305] < L ≤ 60 [1524]	± 1/16
60 [1524] < L ≤ 120 [3048]	± 1/8
120 [3048] < L ≤ 300 [7620]	± 1/4
300 [7620] < L	± 5/16
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	



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SHEET 1 OF 1
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