



## Power Detector, SMA, Postive Output Slope, 50 MHz to 5 GHz

### Detectors Technical Data Sheet

PE80P1000

The PE80P1000 is a broadband Power Detector module that covers a frequency band from 50 MHz to 5000 MHz. Desireable performance features include a positive output slope with a true RMS response from 0.1 to 5 volts, 30 dB of dynamic range, and a fast pulse response of 7  $\mu$ sec typical. The 50 ohm detector design requires a single +5 volt power supply, can handle up to +15 dBm input power, and supports Female SMA connectors. The rugged compact package assembly operates over a -40°C to +85°C temperaure range and is designed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude.

#### Features

- Frequency Range: 50 to 5000 MHz
- Dynamic Range: 30 dB
- True RMS Output Voltage Response: 0.1 to 5V
- Positive Output Slope
- Input VSWR: 1.4:1 typ
- Absolute Max RF Input Power: +15 dBm
- Pulse Reponse: 7  $\mu$ sec
- DC Power: +5V
- SMA Female Connectors
- Operating Temperature: -40°C to +85°C
- Guaranteed to meet MIL-STD-202 Environmental Conditions

#### Applications

- Transmit/Receive Power Measurement
- Input Protection
- Return Loss Measurement
- RF Pulse Detection
- Radar
- Electronic Warfare
- Test and Measurement
- Wireless Signal Testing & Optimization
- Power Amplifier Linearization
- CW & Modulated Waveform Measurements

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	50		5	GHz
VSWR		1.4:1	2:1	
Dynamic Range	27	30		dB
Output Voltage (RMS Response)				
Pin = +10 dBm @ 1000 MHz	4.85	4.95		V
Pin = -20 dBm @ 1000 MHz	0.05	0.15		V
Conversion Gain	6	6.3		V/Vrms
Deviation @25°C		±0.25	±0.5	dB
Deviation over OTR		±0.25	±0.5	dB
Response Time				
Pin = -25 - 0 dBm			7	us
Pin = 0 - +10 dBm	7		17	us
Output Current Sink	10	20		mA
Short Circuit Current			40	mA

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Power Detector, SMA, Postive Output Slope, 50 MHz to 5 GHz PE80P1000](#)



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Supply Quiescent Current	2	4	mA
Operating Temperature Range	-40	+85	deg C

### Absolute Maximum Rating

Parameter	Rating	Units
RF Input Power	+15	dBm
Supply Voltage	+5.5	V
Operating Temperature	-40 to +85	°C
Storage Temperature	-55 to +125	°C



ESD Sensitive Material,  
Transport material in  
Approved ESD bags.  
Handle only in approved  
ESD Workstation.

### Mechanical Specifications

Connector 1	SMA Female
Connector 2	SMA Female

### Environmental Specifications

#### Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +125 deg C

Humidity	MIL-STD-202F, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B

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

### Plotted and Other Data

Notes:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Power Detector, SMA, Postive Output Slope, 50 MHz to 5 GHz PE80P1000](#)

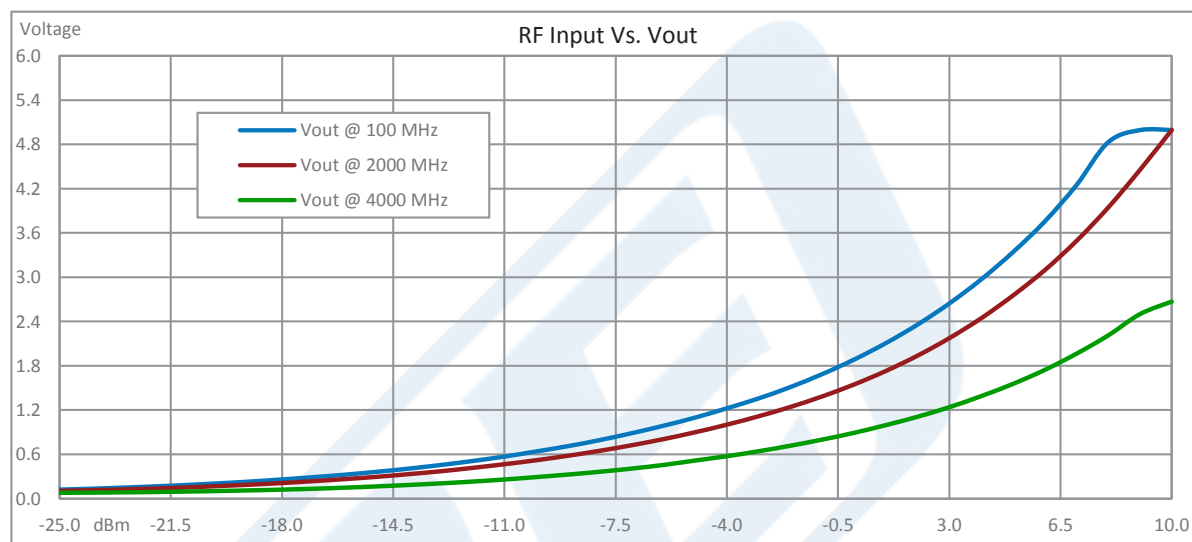


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### Typical Performance Data



Power Detector, SMA, Postive Output Slope, 50 MHz to 5 GHz 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: [Power Detector, SMA, Postive Output Slope, 50 MHz to 5 GHz PE80P1000](https://www.pasternack.com/power-detector-sma-50-mhz-5-ghz-pe80p1000-p.aspx)

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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.