



Schottky Zero Bias Detector, SMA, Negative Video Out, +20 dBm max Pin, 10 MHz to 12.4 GHz

## Detectors Technical Data Sheet

**PE8012**

### Features

- Zero Bias Schottky Diode Detector
- 10 MHz to 12.4 GHz Frequency Range
- Extremely Flat Frequency Response
- Maximum Input Power +20 dBm, Peak Input Power +27 dBm
- Negative Video Output Polarity

### Applications

- Electronic Warfare
- Test & Measurement
- System Monitoring
- AM Noise Measurements
- Military & Space
- Radar
- Pulsed RF Measurements in Ultra Broadband Applications
- Leveling Pulse Signal Sources
- Military Communications Systems

### Description

The PE8012 is a zero bias Schottky detector that displays an extremely flat frequency response over a broad frequency range from 10 MHz to 12.4 GHz. The model features negative video output polarity and operates over a wide dynamic range of -30 dBm to +20 dBm input power. No external DC bias source is required. Performance includes 50 ohm matched inputs for excellent VSWR of 1.4:1 typical, high voltage sensitivity for very small signal detection of 500 mV/mW typical, and can withstand maximum input power levels up to +20 dBm CW. Operating temperature range is 0°C to +90°C. The compact and rugged cylindrical package supports an SMA male input connector and SMA female output connector and is ideal for use with precision test and measurement, instrumentation, and subsystem assemblies.

### Electrical Specifications (@ +25°C)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.01		12.4	GHz
VSWR		1.4:1	1.6:1	
Voltage Sensitivity		500	500	mV/uW
Flatness		±0.25	±0.3	dB
Input Power			20	dBm
Video Capacitance		470		pF
Dynamic Range	-30		20	dBm
Operating Temperature Range	-54		100	deg C
Output Polarity		Negative		

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Schottky Zero Bias Detector, SMA, Negative Video Out, +20 dBm max Pin, 10 MHz to 12.4 GHz PE8012](#)



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### Mechanical Specifications

**Size**

Length	1.21 in [30.73 mm]
Width	0.31 in [7.87 mm]
Height	0 in [0 mm]
Weight	0.0235 lbs [10.66 g]
Connector 1	SMA Male
Connector 2	SMA Female

### Environmental Specifications

**Temperature**

Operating Range	-54 to +100 deg C
Storage Range	-65 to +100 deg C

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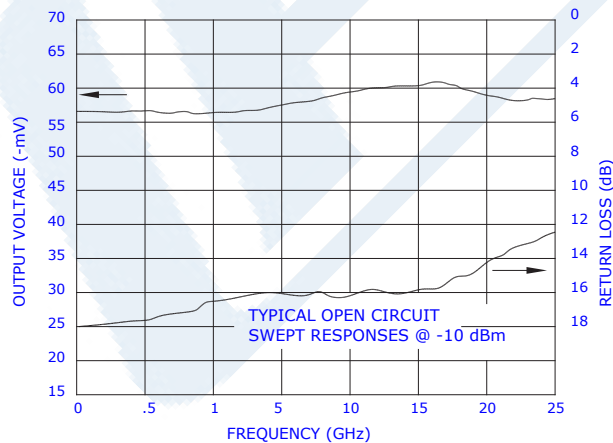
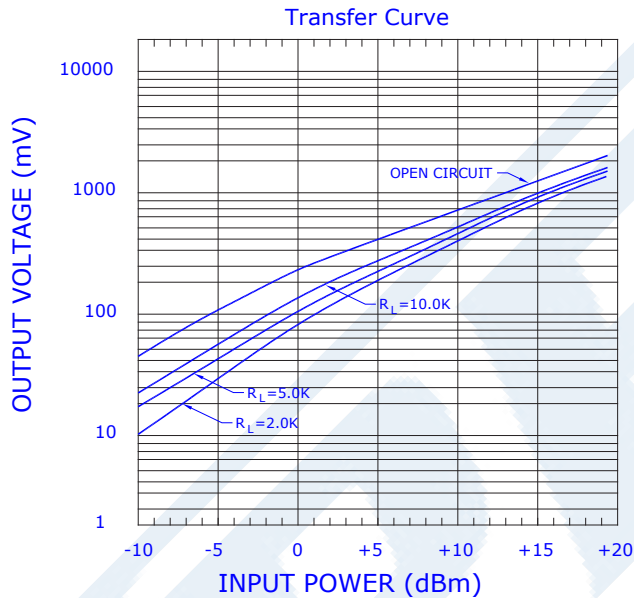
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**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:



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Schottky Zero Bias Detector, SMA, Negative Video Out, +20 dBm max Pin, 10 MHz to 12.4 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.

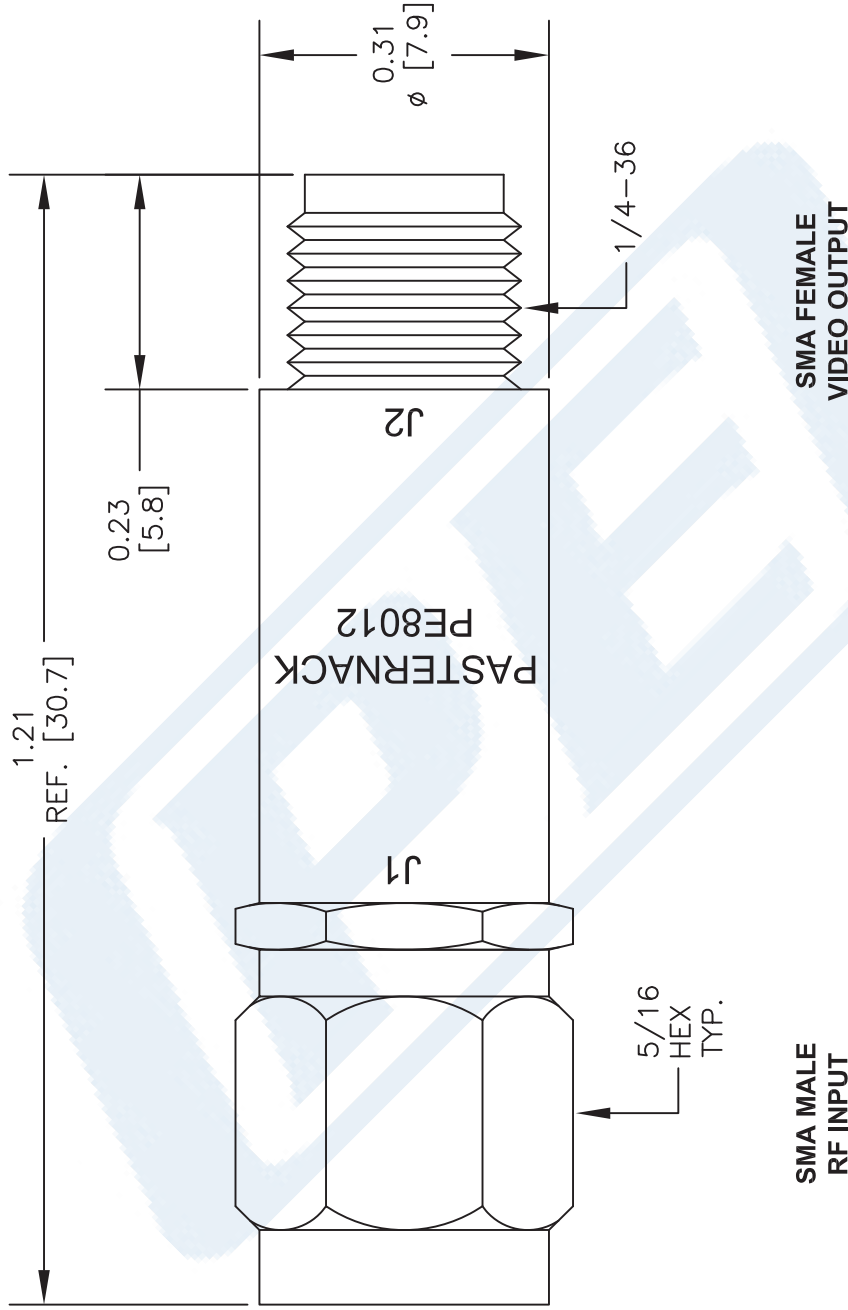
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URL: <https://www.pasternack.com/50-ohm-sma-zero-biased-detector-negative-10-mhz-12400-mhz-pe8012-p.aspx>

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.

# PE8012 CAD Drawing

Schottky Zero Bias Detector, SMA, Negative Video Out, +20 dBm max Pin, 10 MHz to 12.4 GHz



DWG TITLE

**PE8012**

NOTES:  
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.  
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.  
 3. DIMENSIONS ARE IN INCHES [mm].

FSCM NO. 53919

CAD FILE 090313

SCALE N/A

SIZE A

2233



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