



Zero Bias Detector, SMA, Negative Video Out, 10 MHz to 4 GHz

TECHNICAL DATA SHEET

PE8011

The PE8011 is a zero bias Schottky detector that displays an extremely flat frequency response over a broad frequency range from 10 MHz to 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 1.3:1 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.

**Features**

- Zero Bias Schottky Diode Detector
- 10 MHz to 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

**Electrical Specifications**

Description	Minimum	Typical	Maximum	Units
Frequency Range	10 MHz		4 GHz	
VSWR			1.3:1	
Voltage Sensitivity		500		mV/mW
Flatness		±0.3		dB
Input Power			+20	dBm
Video Capacitance		470		pF
Dynamic Range	-30		+20	dBm

**Mechanical Specifications**

**Temperature**

Operating Range 0 to +90 deg C  
Storage Range -65 to +150 deg C

**Size**

Length 1.22 in [30.99 mm]  
Width 0.312 in [7.92 mm]  
Weight 0.017 lbs [7.71 g]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Zero Bias Detector, SMA, Negative Video Out, 10 MHz to 4 GHz PE8011](#)



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

**Plotted and Other Data**

Notes:

- Values at +25 °C, sea level

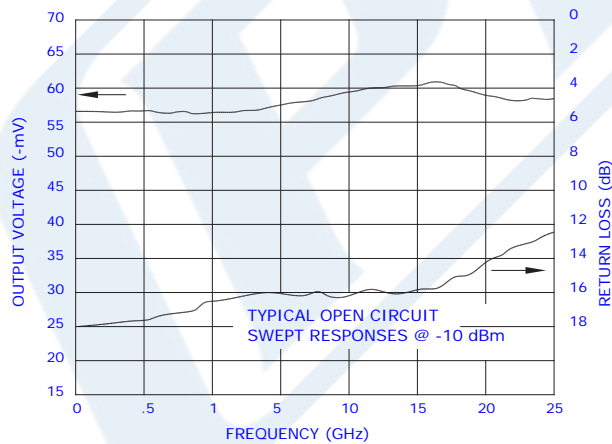
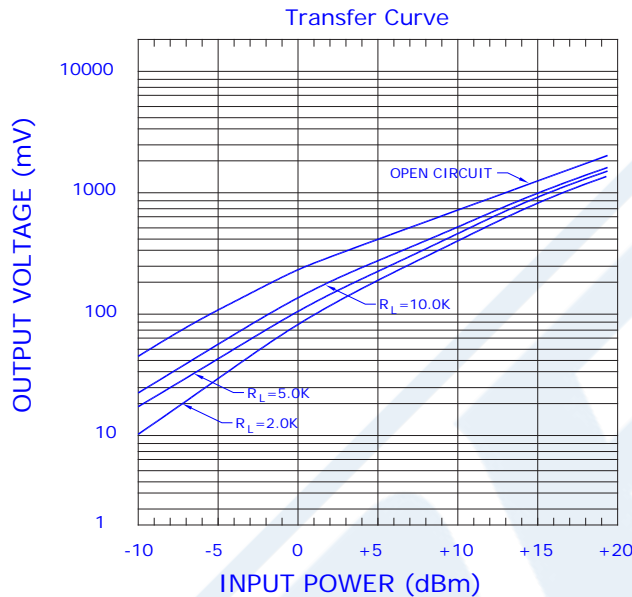
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Zero Bias Detector, SMA, Negative Video Out, 10 MHz to 4 GHz from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

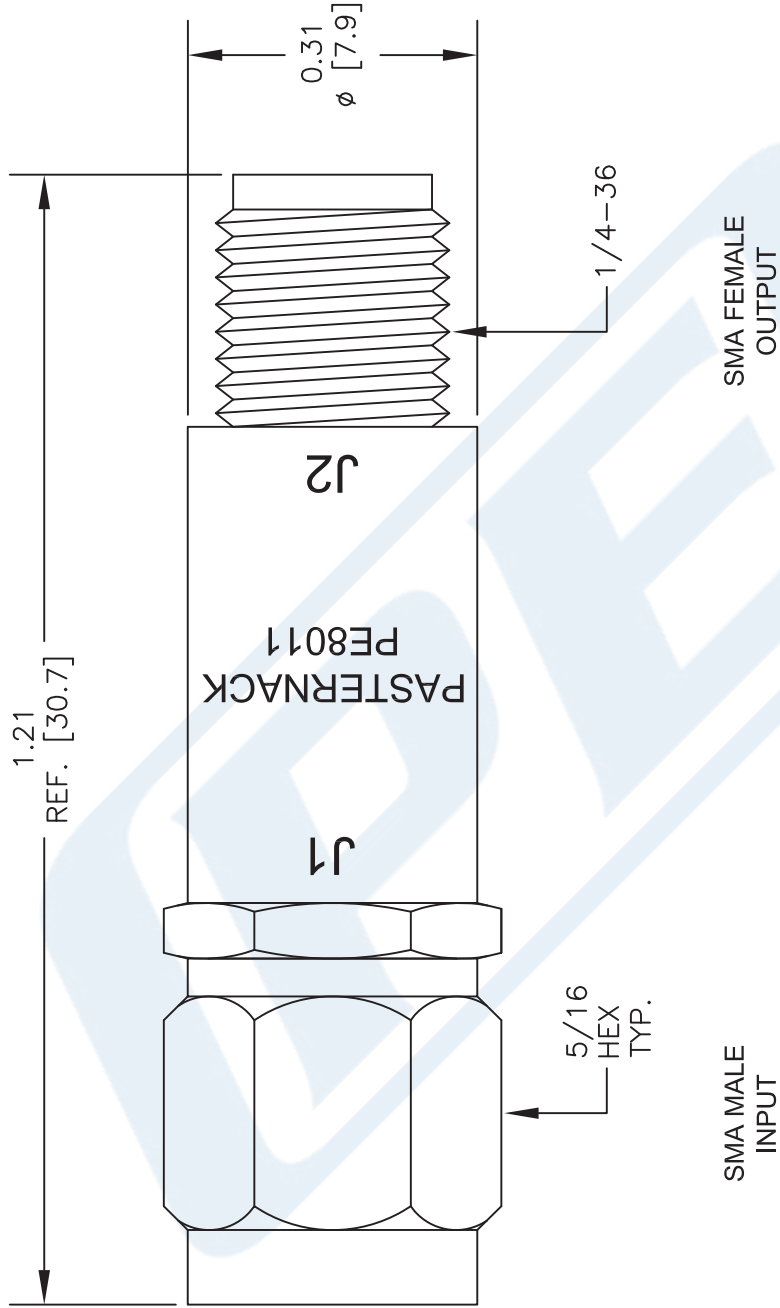
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Zero Bias Detector, SMA, Negative Video Out, 10 MHz to 4 GHz PE8011](#)

URL: <https://www.pasternack.com/50-ohm-sma-zero-biased-detector-negative-10-mhz-4000-mhz-pe8011-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.

# PE8011 CAD Drawing

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### STANDARD TOLERANCES

.X ±0.2  
.XX ±0.1  
.XXX ±0.05

\*STANDARD TOLERANCES APPLY  
ONLY TO DIMENSIONS IN INCHES



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DWG TITLE

**PE8011**

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].

CAGE CODE 53919

CAD FILE 010617

SCALE N/A

SIZE A

2233