



## Zero Bias Detector, SMA, Negative Video Out, 2 GHz to 4 GHz

### Detectors Technical Data Sheet

PE8015

The PE8015 is a zero bias Schottky detector that displays an extremely flat frequency response over a broad frequency range from 2 GHz 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 1.2:1 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 -54°C to +100°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
- 2 GHz 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     | 2 GHz   |         | 4 GHz   |       |
| VSWR                |         | 1.35:1  | 1.45:1  |       |
| Voltage Sensitivity |         | 500     |         | mV/mW |
| Flatness            |         | ±0.18   | ±0.2    | dB    |
| Input Power         |         |         | +20     | dBm   |
| Video Capacitance   |         | 20      |         | pF    |
| Dynamic Range       | -30     |         | +20     | dBm   |

#### Mechanical Specifications

|             |                    |
|-------------|--------------------|
| <b>Size</b> |                    |
| Length      | 1.21 in [30.73 mm] |
| Weight      | 0.02 lbs [9.07 g]  |

#### Environmental Specifications

|                    |                   |
|--------------------|-------------------|
| <b>Temperature</b> |                   |
| Operating Range    | -54 to +100 deg C |
| Storage Range      | -65 to +150 deg C |

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, 2 GHz to 4 GHz PE8015](#)



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

**Plotted and Other Data**

Notes:

- Values at +25 °C, sea level

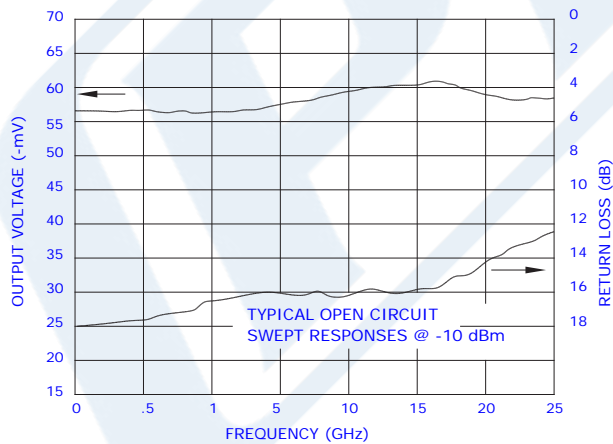
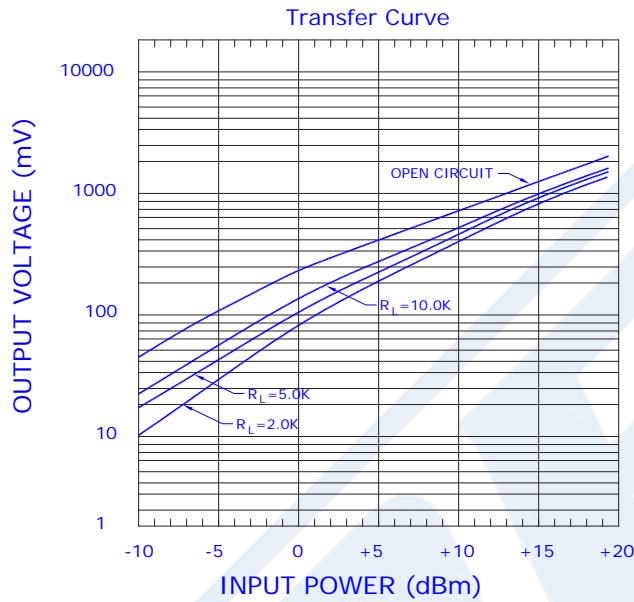
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Zero Bias Detector, SMA, Negative Video Out, 2 GHz to 4 GHz from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

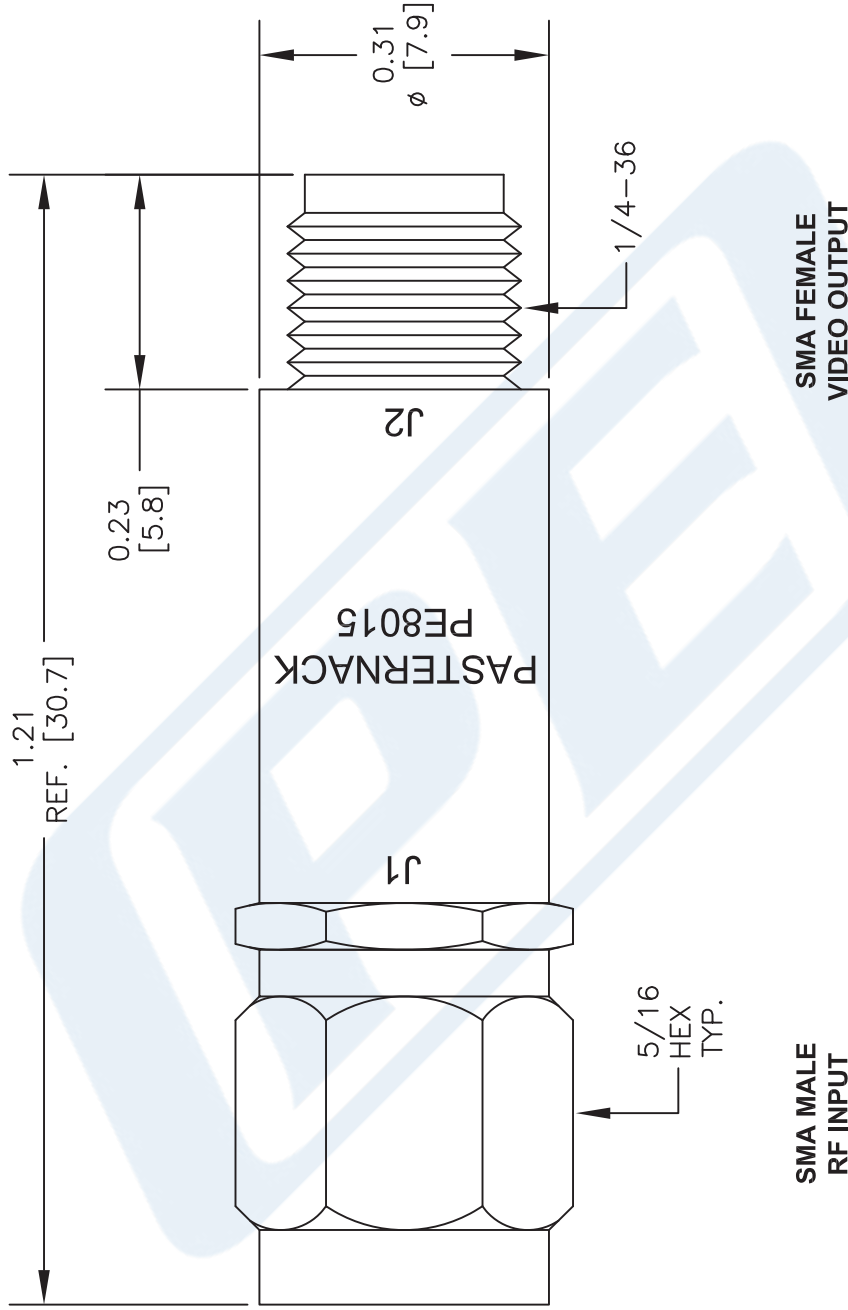
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Zero Bias Detector, SMA, Negative Video Out, 2 GHz to 4 GHz PE8015](https://www.pasternack.com/50-ohm-sma-zero-biased-detector-negative-2000-mhz-4000-mhz-pe8015-p.aspx)

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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.

# PE8015 CAD Drawing

Zero Bias Detector, SMA, Negative Video Out, 2 GHz to 4 GHz



DWG TITLE

**PE8015**

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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