



Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime,
Positive Video Out, +17 dBm max Pin, 2 GHz to 6 GHz

Detectors Technical Data Sheet

PE80T6017

The PE80T6017 is a coaxial packaged Tunnel Diode Detector that features rugged Germanium (Ge) planar construction and operates over a broadband frequency range of 2.0 to 6.0 GHz. The zero biased design features extremely low video output resistance of 125 ohms typical, and an extremely fast pulse response risetime of 5 nsec typical. Additional desirable features include excellent dynamic range with very efficient low level RF signal detection, wide video bandwidth, and excellent loaded voltage output sensitivity. The Detector exhibits an extremely stable and flat Positive Output Polarity response across a wide frequency band and has excellent temperature stability across an operating temperature range of -65°C to +115°C. Maximum CW input power handling is +17 dBm. The compact cylindrical package features an SMA male RF input connector and an SMA female Video output connector.

Features

- Tunnel Diode Detector
- Rugged Germanium (Ge) Planar Construction
- Broadband Frequency: 0.1 to 2 GHz
- Zero Bias Design
- Positive Video Output
- Operational Temperature: -65°C to +115°C
- Extremely Fast Pulse Video Response: 5 nsec typ. risetime
- Max CW Input Power +17 dBm
- Extremely Low Video Resistance: 125 ohms typical
- SMA Male RF Input and SMA Female Video Output Connectors
- Excellent Temperature Stability
- Excellent Dynamic Range with Very Efficient Low Level Signal Detection
- Excellent Loaded Voltage Output Sensitivity

Applications

- Transmitter Monitoring
- Radar Equipment
- Missile Guidance Systems
- Input to Low Noise Amplifiers
- ECM Receivers
- Power and Signal Monitors
- Doppler Radar and Beacon Receivers
- Test & Measurement
- Pulse Applications

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	2 GHz		6 GHz	
VSWR		2.5:1		
Pulse Video Response Risetime		5		ns
Voltage Sensitivity		1,000		mV/mW
Flatness			±0.5	dB
Input Power			+17	dBm
Video Output Resistance		125		Ohms
Video Capacitance		20		pF
Tangential Signal Sensitivity (TSS)		-50		dBm
Operating Temperature Range	-65		+115	deg C

Electrical Specification Notes:

Typical values are measured at +25°C and are not guaranteed. TSS is measured with a 2 MHz video bandwidth and 2 dB NF amplifier. Input Power is 17 dBm or 3 ERG Spike Max

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime, Positive Video Out, +17 dBm max Pin, 2 GHz to 6 GHz PE80T6017](#)



Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime,
Positive Video Out, +17 dBm max Pin, 2 GHz to 6 GHz

Detectors Technical Data Sheet

PE80T6017

Mechanical Specifications

Size

Length

1.21 in [30.73 mm]

Width

0.81 in [20.57 mm]

Environmental Specifications

Temperature

Operating Range

-65 to +115 deg C

Storage Range

-65 to +125 deg C

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: [Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime, Positive Video Out, +17 dBm max Pin, 2 GHz to 6 GHz PE80T6017](#)



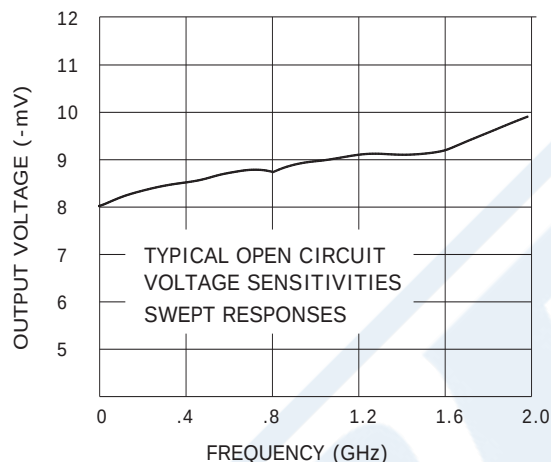
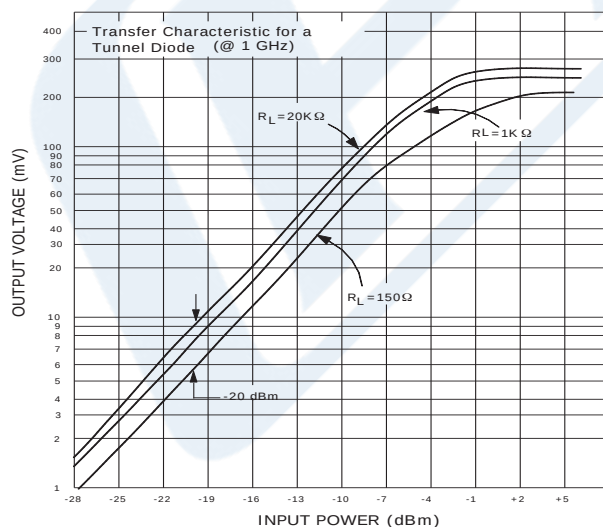
Tunnel Diode Detector, SMA, 5 nsec Pulse Risettime,
Positive Video Out, +17 dBm max Pin, 2 GHz to 6 GHz

Detectors Technical Data Sheet

PE80T6017

Typical Performance Data

Typical Performance at +25° C



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Tunnel Diode Detector, SMA, 5 nsec Pulse Risettime, Positive Video Out, +17 dBm max Pin, 2 GHz to 6 GHz PE80T6017](#)



Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime,
Positive Video Out, +17 dBm max Pin, 2 GHz to 6 GHz

Detectors Technical Data Sheet

PE80T6017

Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime, Positive Video Out, +17 dBm max Pin, 2 GHz to 6 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: [Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime, Positive Video Out, +17 dBm max Pin, 2 GHz to 6 GHz PE80T6017](https://www.pasternack.com/tunnel-diode-detector-sma-positive-2-6-ghz-pe80t6017-p.aspx)

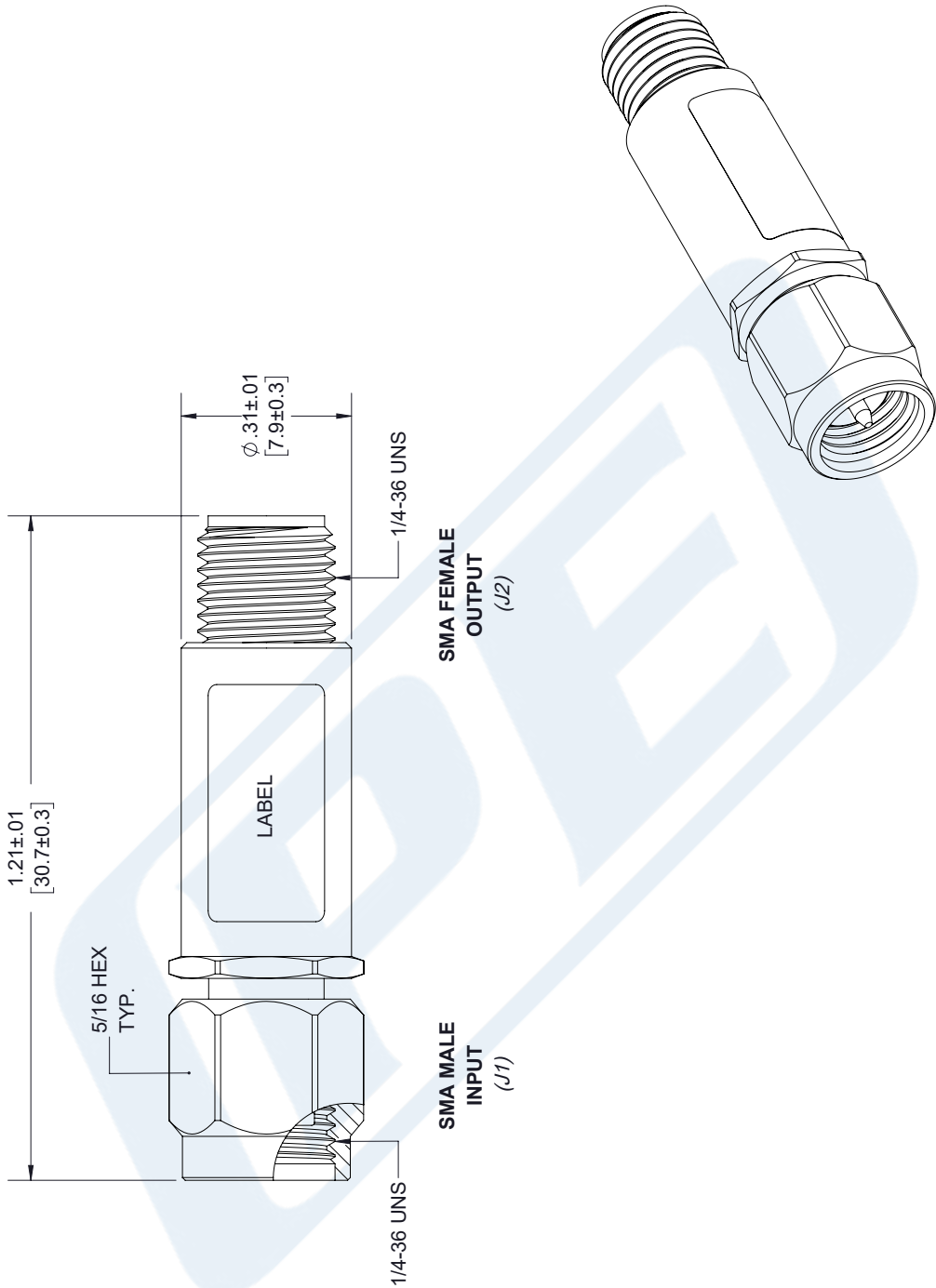
URL: <https://www.pasternack.com/tunnel-diode-detector-sma-positive-2-6-ghz-pe80t6017-p.aspx>

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.

PE80T6017 CAD Drawing

Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime, Positive
Video Out, +17 dBm max Pin, 2 GHz to 6 GHz

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	01/14/19	T.GALLA



LABEL:

PASTERNAK

J1 PE80T6017 J2

S/N: XXXXX



THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT
ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

UNLESS OTHERWISE SPECIFIED
LEADING DIMENSIONS ARE IN INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

X±.2 [5.08] FRACTIONS
XX±.01 [.25] ±.132
XXX±.005 [.13] ANGLES ± 1°

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION



PE PASTERNAK
an INFINITI brand

Pasternack Enterprises, Inc.
P.O. Box 16759, Irvine, CA 92623.
Phone: 1.949.261.1920 | 1.866.727.8376
Fax: 1.949.261.7451
www.pasternack.com | e-mail: sales@pasternack.com

SIZE A CAGE 53919 DRAWN BY KDANG PART NUMBER PE80T6017 REV A

THE INFORMATION AND
DESIGN IN THIS DOCUMENT
IS THE PROPERTY OF
PASTERNAK CORPORATION.
ALL RIGHTS RESERVED.

SHEET 1 OF 1

SCALE N/A

REV A