PASTERNACK
an INFINITE brand

Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime, Negative Video Out, +17 dBm max Pin, 1 GHz to 2 GHz

Detectors Technical Data Sheet PE80T6012

The PE80T6012 is a coaxial packaged Tunnel Diode Detector that features rugged Germanium (Ge) planar construction and operates over a broadband frequency range of 1.0 to 2.0 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 Negative 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
- Negative 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 Monotoring
- 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	1000 MHz		2 GHz	
VSWR		2:1		
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		50		pF
Tangential Signal Sensitivity (TSS)		-51		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, Negative Video Out, +17 dBm max Pin, 1 GHz to 2 GHz PE80T6012

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
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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:

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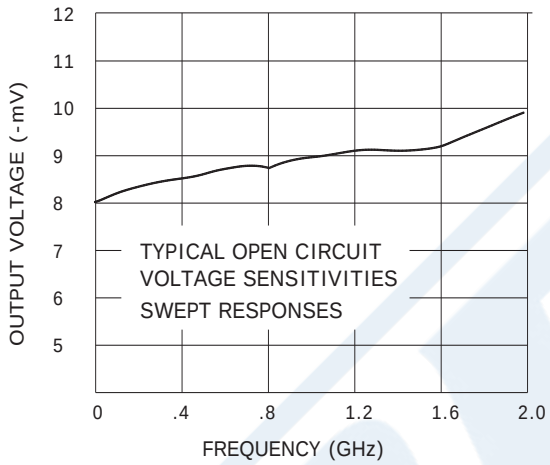
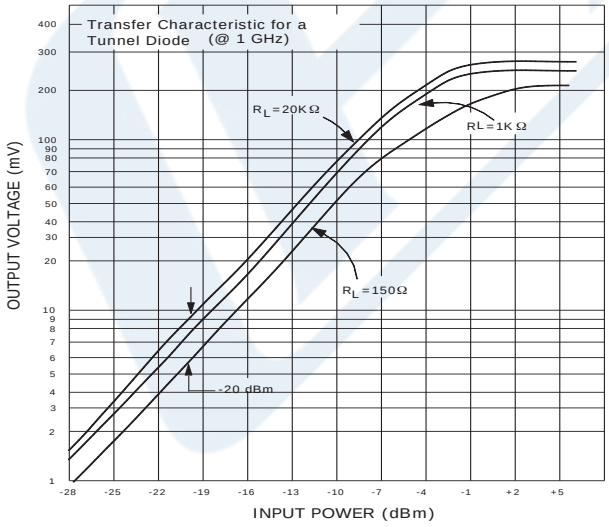
Typical Performance Data

Typical Performance at +25° C





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Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime, Negative Video Out, +17 dBm max Pin, 1 GHz to 2 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/tunnel-diode-detector-sma-negative-1-2-ghz-pe80t6012-p.aspx

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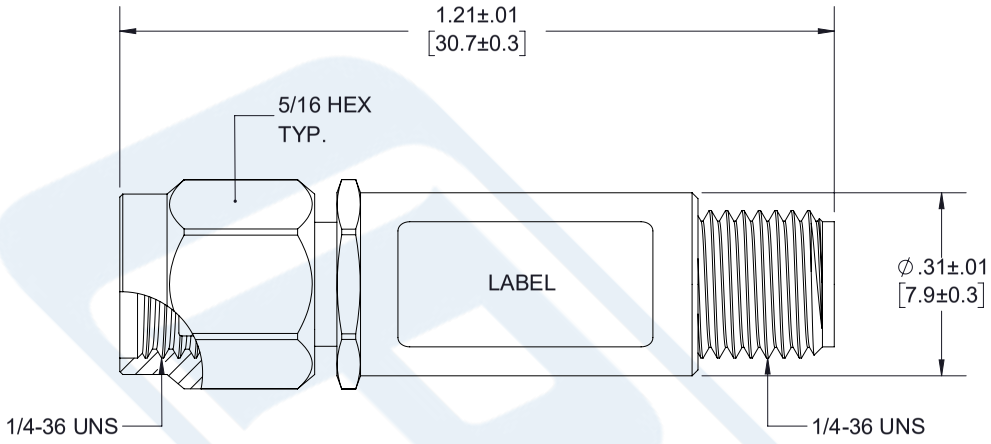
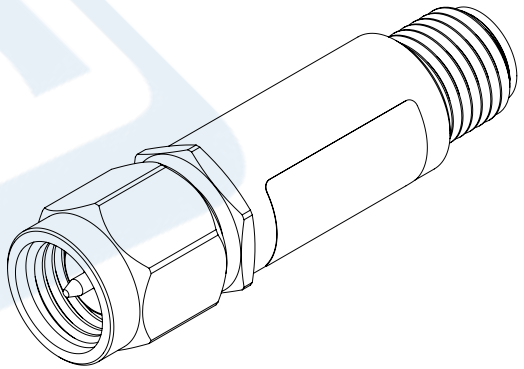
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	01/14/19	T.GALLA

PE80T6012 CAD Drawing

Tunnel Diode Detector, SMA, 5 nsec Pulse Risetime, Negative Video Out, +17 dBm max Pin, 1 GHz to 2 GHz





LABEL:

PASTERNACK
J1 **PE80T6012** J2
S/N: XXXXX

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

TOLERANCES:

.X=± .2 [5.08]	FRACTIONS
.XX=± .01 [.25]	± 1/32
.XXX=± .005 [.13]	ANGLES ± 1°

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SHEET	OF
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SCALE: N/A

SIZE	CAGE	DRAWN BY	PART NUMBER	REV
A	53919	KDANG	PE80T6012	A