



Threshold Detector, 2.92mm, Video Out,  
+17 dBm max Pin, 16 GHz to 40 GHz

## Detectors Technical Data Sheet

PE80T1002

The PE80T1002 is a High Speed, TTL Logic Output Adjustable Threshold Detector Designed to Operate from 16 GHz to 40 GHz. This Detector incorporates additional gain stages for higher input dynamic range that covers -20 to 0 dBm, and has a fast response time of 100 ns Max. The Rugged Ultra Compact Package Design utilizes field replaceable 2.92mm connectors and control pins for voltage, ground and threshold adjustment, and TTL Video output. Threshold adjustment requires an external resistor between the adjust pin and ground. This module is designed to meet MIL-STD-202F Environmental Conditions that includes Humidity, Shock, and Vibration.

### Features

- High Speed Threshold Detector
- 16 GHz to 40 GHz Frequency Range
- Input Operating Range -20 to 0 dBm
- Threshold Adjustment (External Resistor Required)
- TTL Output Logic
- Pin Max +17 dBm
- Fast Response Time 100 ns Max
- Designed to meet MIL-STD-202F Environmental Conditions
- Field Replaceable 2.92mm Connectors

### 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	16		40	GHz
VSWR			2.5:1	
Input Power			+17	dBm
Dynamic Range	-20		+0	dBm
Response Time			100	ns
Detected Video Output	TTL TTL="1" on Video Out For Signals Above Threshold Setting TTL="0" on Video Out For Signals Below Threshold Setting			
DC Power Supply @ +15 Volts			66	mA
Operating Temperature Range	-20		+55	deg C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Threshold Detector, 2.92mm, Video Out, +17 dBm max Pin, 16 GHz to 40 GHz PE80T1002](#)



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### Mechanical Specifications

#### Size

Length	1 in [25.4 mm]
Width	0.62 in [15.75 mm]
Height	0.22 in [5.59 mm]
Weight	0.025 lbs [11.34 g]
Connector 1	2.92mm Female
Pins	Solder Pin

### Environmental Specifications

#### Temperature

Operating Range	-20 to +55 deg C
Storage Range	-55 to +100 deg C

Temperature Cycle

MIL-STD-202F, METHOD 107

Humidity

MIL-STD-202F, METHOD 103B COND. B

Shock

MIL-STD-202F, METHOD 213B COND. B

Vibration

MIL-STD-202F, METHOD 204D COND. B

Altitude

MIL-STD-202F, METHOD 105C COND. B

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

### Plotted and Other Data

Notes:

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### Typical Performance Data

#### Return Loss



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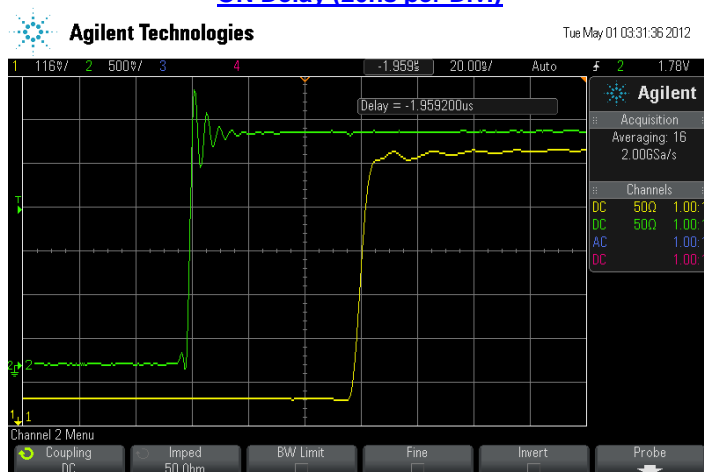
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## Detectors Technical Data Sheet

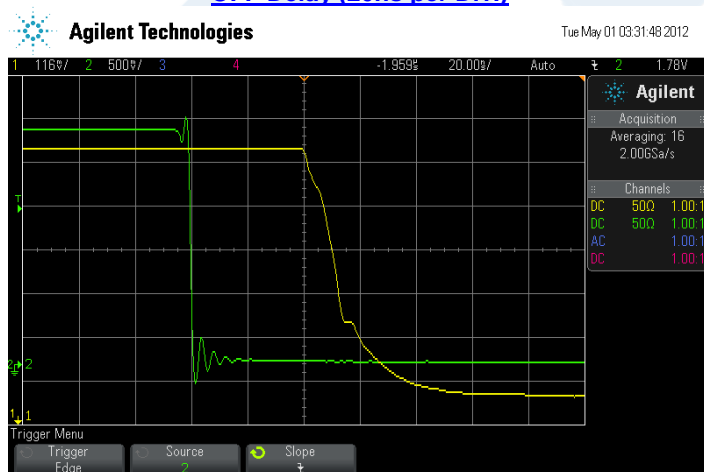
PE80T1002

### Propagation Delay

#### ON Delay (20ns per Div.)



#### OFF Delay (20ns per Div.)



Green Trace = RF Input Pulse  
Yellow Trace = TTL Output

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Threshold Detector, 2.92mm, Video Out, +17 dBm max Pin, 16 GHz to 40 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: [Threshold Detector, 2.92mm, Video Out, +17 dBm max Pin, 16 GHz to 40 GHz PE80T1002](https://www.pasternack.com/2.92mm-frequency-detector-16-40-ghz-pe80t1002-p.aspx)

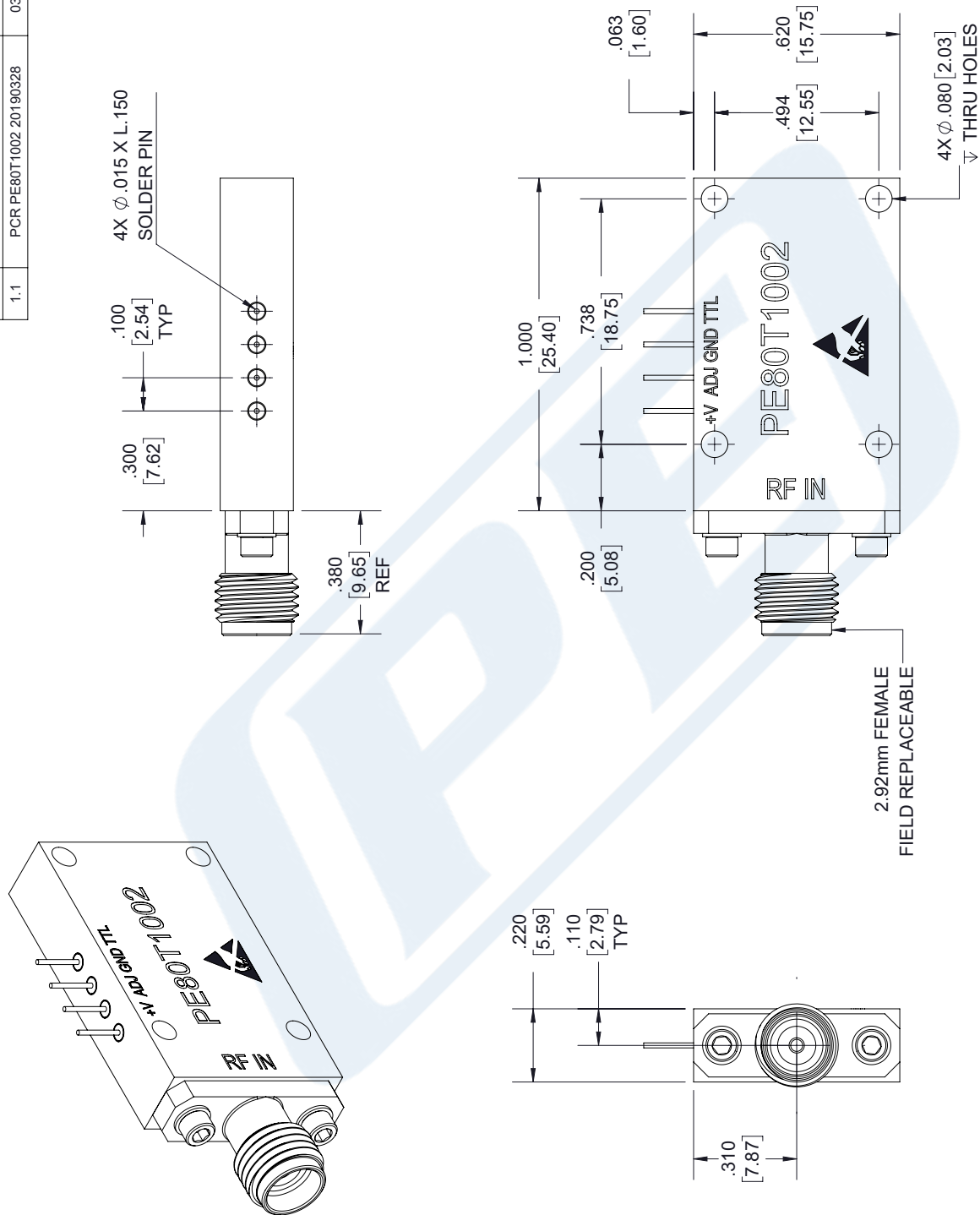
URL: <https://www.pasternack.com/2.92mm-frequency-detector-16-40-ghz-pe80t1002-p.aspx>

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# PE80T1002 CAD Drawing

Threshold Detector, 2.92mm, Video Out, +17 dBm max Pin, 16 GHz to 40 GHz

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1.1	PCR PE80T1002 20190328	03/28/19	T. GALLA



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE IN INCHES DIMENSIONS IN [ ] ARE MILLIMETERS				<div><div><div>PE</div><div>PASTERNAK</div><div>an INFINITE brand</div></div><div>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</div></div>				THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.			
TOLERANCES:				SHEET		1		OF		1	
X±.2 [5.08] FRACTIONS				SCALE		N/A					
XX±.01 [.25] ±.132											
XXX±.005 [.13] ANGLES ± 1°											
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.											
THIRD-ANGLE PROJECTION											
				SIZE		CAGE		DRAWN BY		PART NUMBER	
				A		53919		K.DANG		PE80T1002	
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