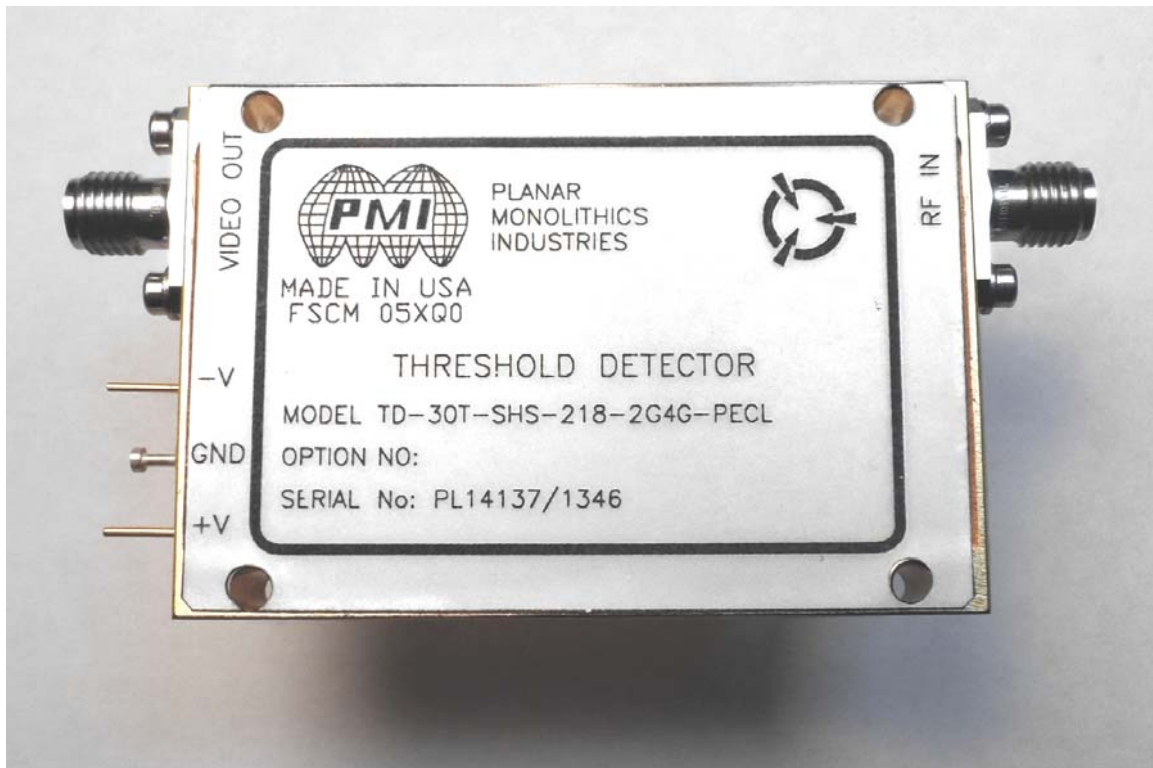




**Typical Characteristics
on
TD-30T-SHS-218-2G4G-PECL**

**PMI MODEL NUMBER TD-30T-SHS-218-2G4G-PECL IS A HIGH SPEED,
LVPECL LOGIC OUTPUT THRESHOLD DETECTOR DESIGNED TO
OPERATE FROM 2.0 GHz TO 4.0 GHz. THIS DETECTOR HAS A
PROPAGATION DELAY OF 15 ns MAXIMUM.**



October 31, 2013

Designed By: PMI Engineering

**Tested & Reported By:
Kevin Mansfield**

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com



Typical Characteristics on TD-30T-SHS-218-2G4G-PECL

DESCRIPTION
 PMI MODEL TD-30T-SHS-218-2G4G-PECL IS A HIGH SPEED, LPECL LOGIC OUTPUT THRESHOLD DETECTOR DESIGNED TO OPERATE FROM 2.0 GHz TO 4.0 GHz. THIS DETECTOR HAS A PROPAGATION DELAY OF 15 ns MAXIMUM.

SPECIFICATIONS

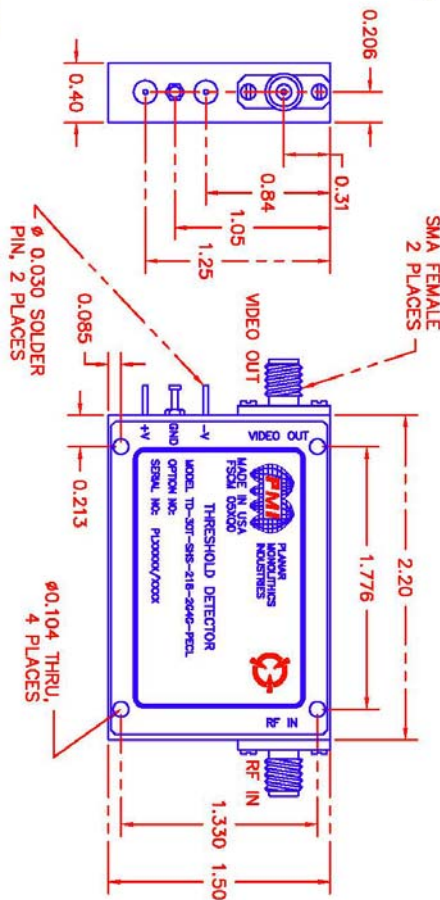
- FREQUENCY RANGE: 2 GHz TO 18 GHz (OPTIMIZED 2 GHz TO 4 GHz)
- VSWR: 3.0 : 1 MAXIMUM @ -20 dBm
- MINIMUM SIGNAL LEVEL FOR LOGIC 1: -20 dBm @ 2 GHz
- THRESHOLD VARIATION OVER FREQUENCY (ANY 1 GHz WINDOW): ±0.5 dB
- MINIMUM SIGNAL LEVEL FOR LOGIC 0: -25 dBm
- DYNAMIC RANGE: UP TO +10 dBm
- PROPAGATION DELAY (FROM 50% OF AN INPUT OF -20 dBm): 15 ns MAX
- OUTPUT LOGIC: LPECL COMPATIBLE
- PROPAGATION DELAY (FROM 50% OF AN INPUT OF +10 dBm): 15 ns MAX

- DC POWER SUPPLY
 - +V: +15 VOLTS @ 100 mA MAX
 - V: -15 VOLTS @ 100 mA MAX
- SIZE: 2.2" x 1.50" x 0.40"
- WEIGHT: < 3 OUNCES
- FINISH: GOLD PLATED

ENVIRONMENTAL RATINGS

- TEMPERATURE: -55°C TO +85°C (OPERATING)
-55°C TO +100°C (STORAGE)
- 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
- TEMPERATURE CYCLES: MIL-STD-202F, METHOD 107D COND. A

NOTE: SPECIFICATIONS MAY VARY OVER OPERATING TEMPERATURE
 NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION



REVISIONS		
REV.	DESCRIPTION	DATE
1	ORIGINAL RELEASE	10/04/18

NOTES:
 1) DIMENSIONS ARE IN INCHES
 2) TOLERANCES: 2.5X 30/10
 3) WEIGHT: 2.75 OZ

PLANAR MONOLITHICS INDUSTRIES, INC.
 7311-F GROVE ROAD
 FREDERICK, MARYLAND 21704 USA
 TEL: 301-662-4700 FAX: 301-662-4938
 WEBSITE: www.dmtf.com
 E-MAIL: sales@dmf.com
 ISO 9001 CERTIFIED

PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS	DATE	TITLE
<i>JSY</i>	10/04/18	PRODUCT FEATURE
DESIGN		TD-30T-SHS-218-2G4G-PECL
REVISION	REV. NO.	DATE
ISSUED	A	05X00
		27021471
	1	OF 1



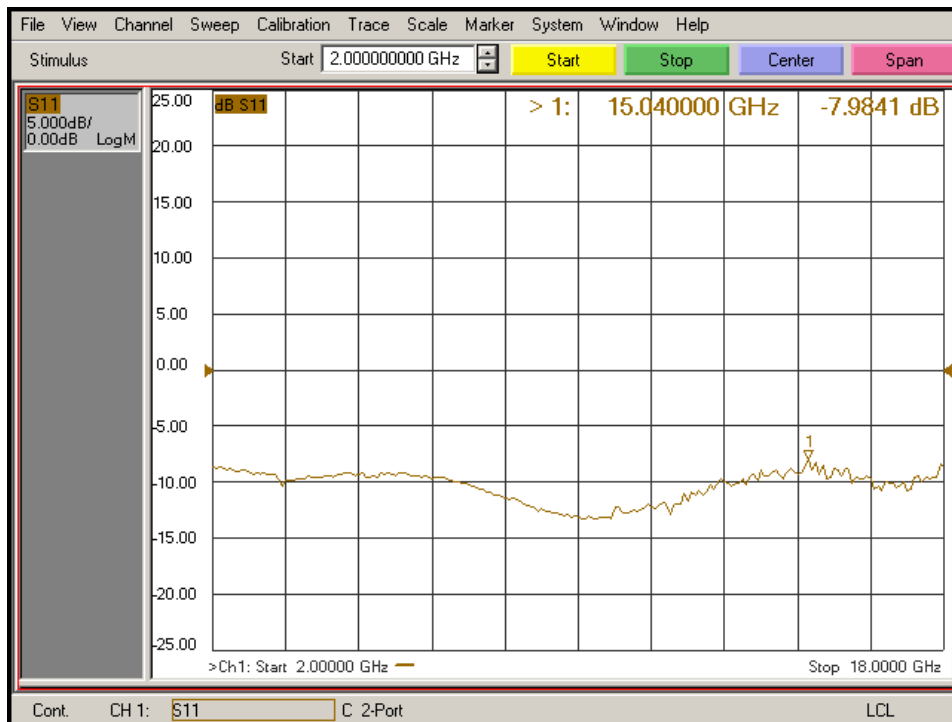
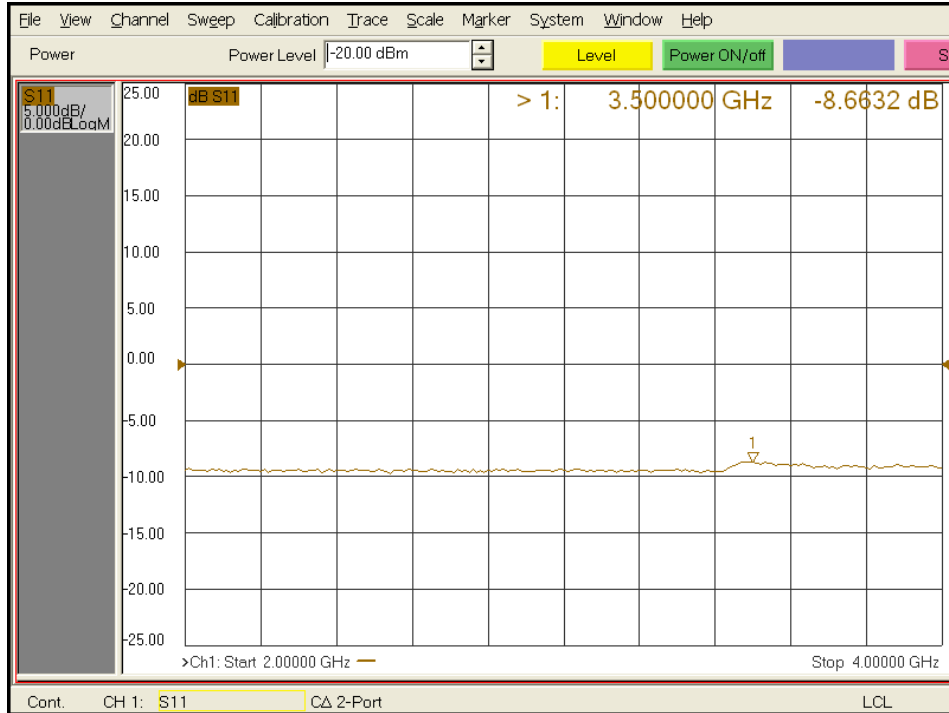
Typical Characteristics
on
TD-30T-SHS-218-2G4G-PECL

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 TO 18 GHz (Optimized 2 – 4 GHz)	2 TO 18 GHz (Optimized 2 – 4 GHz)	
2	VSWR:	3.0: 1 Max @ -20dBm	2.1:1 (See Plot)	
3	Minimum Signal Level for Logic 1:	-20 dBm @ 2.0 GHz	-20.1 dBm @ 2.0 GHz	
4	Threshold Variation over Frequency (Any 1 GHz Window)	± 0.5 dB	± 0.3 dB	
5	Minimum Signal Level for Logic 0	-25 dBm	-20.3 dBm	
6	Dynamic Range:	+10 dBm Max	+10 dBm	
7	Propagation Delay from 50% of an input of -20 dBm	15 ns Max	10.6 ns See Plot	
8	Propagation Delay from 50% of an input of +10 dBm	15 ns Max	3.1 ns See Plot	
9	Output Logic:	LVPECL Compatible	LVPECL Compatible	
10	DC Supply:	+15VDC @ 100 mA Max -15VDC @ 100 mA Max	+15VDC @ 88 mA -15VDC @ 39 mA	



Typical Characteristics on TD-30T-SHS-218-2G4G-PECL

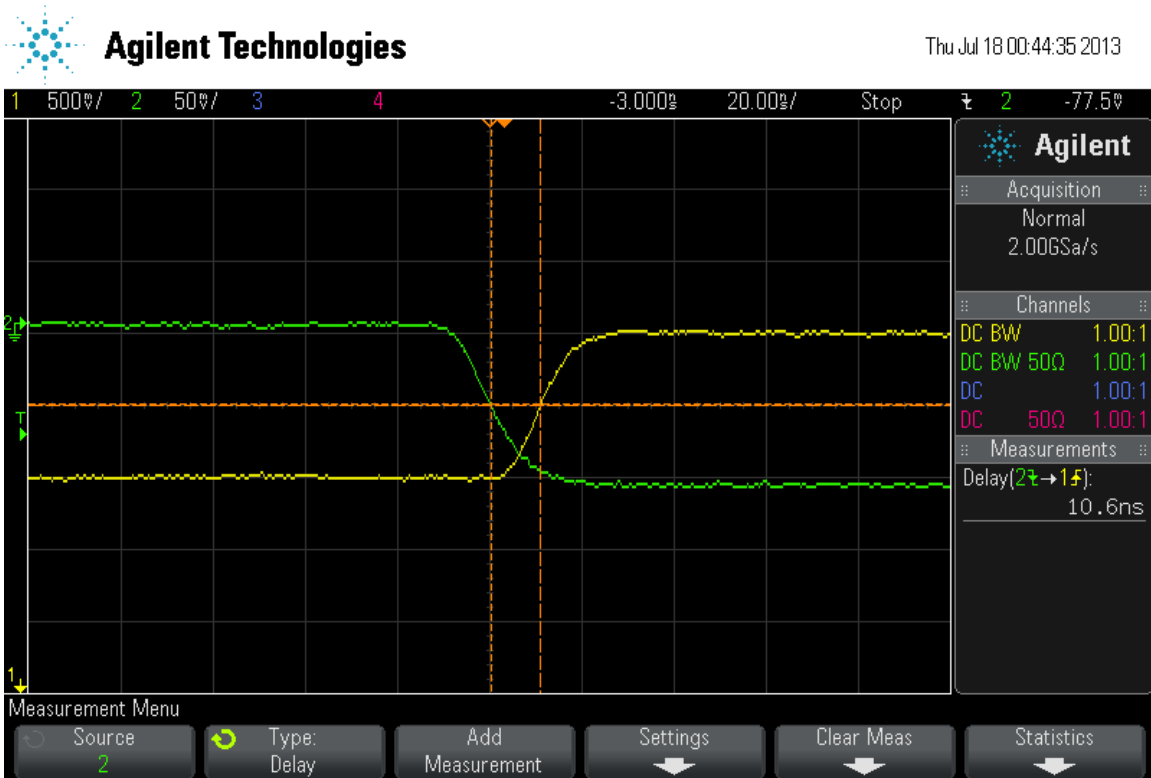
Return Loss





**Typical Characteristics
on
TD-30T-SHS-218-2G4G-PECL**

Propagation Delay
(From 50% of an input of -20dBm)
20ns per Div.

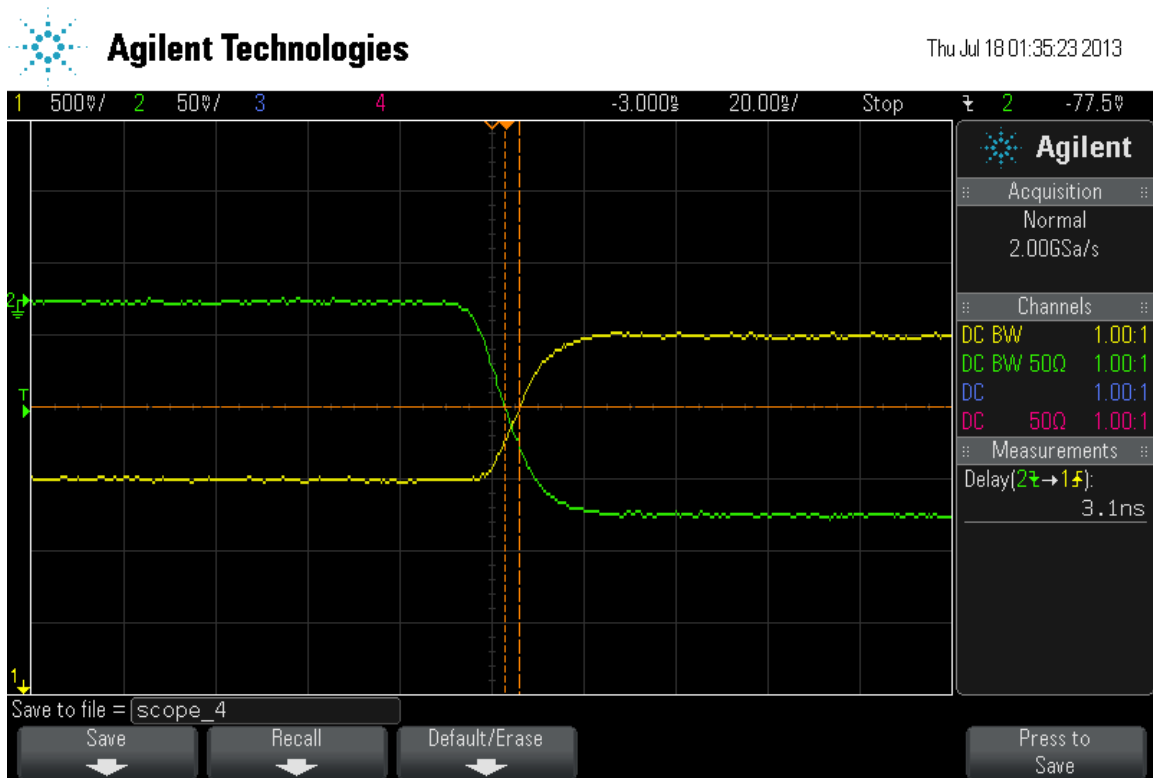


Green = RF Signal (Negative output diode detector)
Yellow = Threshold Detector Video out



**Typical Characteristics
on
TD-30T-SHS-218-2G4G-PECL**

Propagation Delay
(From 50% of an input of +10dBm)
20ns per Div.



Green = RF Signal (Negative output diode detector)
Yellow = Threshold Detector Video out