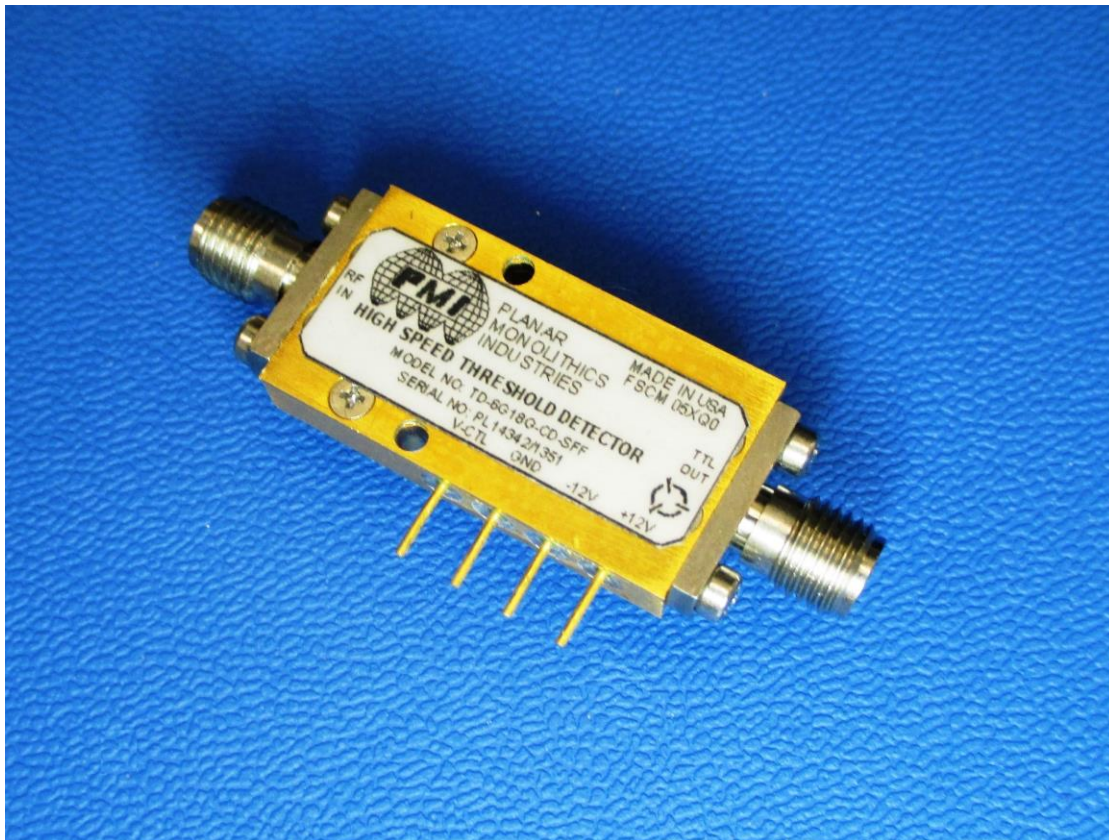




TYPICAL CHARACTERISTICS ON TD-6G18G-CD-SFF

MODEL TD-6G18G-CD-SFF IS A HIGH SPEED THRESHOLD DETECTOR DESIGNED TO OPERATE OVER THE 6.0 GHz TO 18.0 GHz FREQUENCY RANGE, WITH AN ADJUSTMENT THRESHOLD LEVEL OF -30 TO -10dBm AND VSWR OF 3.0:1 MAX. THE UNIT COMES IN A VERY SMALL SIZE WITH FIELD REMOVABLE SMA CONNECTORS. THIS MODEL HAS BEEN DESIGNED USING CUTTING EDGE TECHNOLOGY WHICH PROVIDES STUNNING PERFORMANCE AND RELIABILITY IN A COMPACT PACKAGE.



December 12th 2013

Prepared By: E. Benson
Tested By: E. Benson
Designed By: Brent Baker & John Merriner

4921 Robert J. Mathews Pkwy Suite 1 El Dorado Hills, CA 95762 USA
Phone: (916)542-1401 Fax: (916)265-2597
Email: sales@pmi-rf.com



TYPICAL CHARACTERISTICS ON TD-6G18G-CD-SFF

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	9/24/13	

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-662-5010 FAX: 301-662-1731
WEBSITE: www.pmi-rf.com
E-MAIL: sales@pmi-rf.com
ISO 9001 CERTIFIED

APPROVALS	DATE	PRODUCT FEATURE
DRAWN T. LUDDEN	9/24/13	TD-6G18G-CD-SFF
CHECKED		
ISSUED		
	SIZE FROM NO.	DWG NO.
	A 05X00	27020591
	SCALE N/S	SHEET 1 OF 1

Description:

PMI Model Number: TD-6G18G-CD-SFF is a High Speed Threshold Detector designed to operate over the 6 to 18GHz Frequency Range, with an Adjustable Threshold Level of -30 to +10dBm, and VSWR of 3.0:1 Max. This Unit comes in a Very Small Size with Field Removable SMA Connector on the Input and Output.

Specifications:

Frequency Range: 6.0 to 18.0 GHz
 Dynamic Range: -30 to +10 dBm
 -Setting: -26 to +10 dBm
 -Pulse Signal: ±1.5dB Max.
 Flatness: 20 nsec Typ, 30nsec Max.
 Propagation Delay: TTL Compatible
 Output: 150 nsec Max.
 Recovery Time: 3.0:1 Max.
 (Or Pulse Stretching)
 VSWR @ -20 dBm or Lower: ±12 or ±15 Volts @ +110 mA Max,
 Power Supply: -40mA Max
 Threshold Uncertainty: ±0.75 dB Max.
 Threshold Setting: 0 to 4 volts, Resistive Setting is Optional
 Connectors In/Out: SMA Female
 Finish: Gold Plated

Environmental Ratings:

Temperature: -25°C to + 85°C (Operating)
 -65°C to +125°C (Storage)
 Humidity: MIL-STD-202F, METHOD 103B COND B.
 Shock: MIL-STD-202F, METHOD 213B COND B.
 Altitude: MIL-STD-202F, METHOD 105C COND B.
 Temperature Cycle: MIL-STD-202F, METHOD 107D COND A

Note: The above specifications are subject to change or revision.

Labels in drawing: SMA FEMALE CONNECTOR (2 PLACES), RF IN, HIGH SPEED THRESHOLD DETECTOR, TTL OUT, +12V, -12V, GND, FEEDTHRU PIN, (4 PLACES), LONG TYP., 0.025X0.200, Ø0.078 THRU (2 PLACES), 0.30, 0.19, 0.095, 1.10, 0.70, 0.40, 0.90, 0.90, 0.05.

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
XXX ±0.020
X.XXX ±0.010



TYPICAL CHARACTERISTICS ON TD-6G18G-CD-SFF

TEST DATA

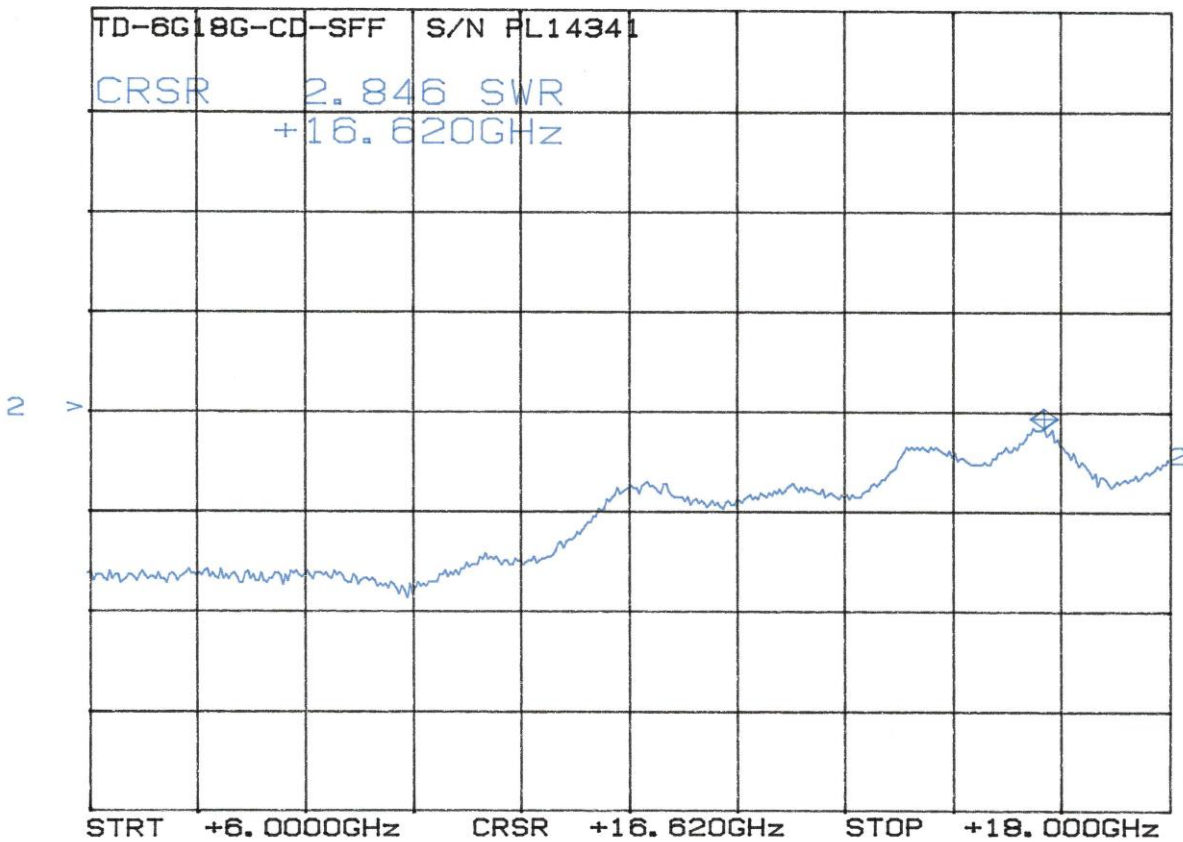
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	PASS FAIL
1	Frequency Range:	6 TO 18 GHz Min	6 TO 18 GHz
2	VSWR:	3.0: 1 Typ @ -20dBm	2.846:1 (See Plot)
3	Threshold Variation Over Frequency	± 1.5 dB (Max)	± 0.6 dB
4	Threshold Uncertainty	± 0.75 dB (Max)	± 0.4 dB
5	Threshold Setting	0 to 4 Volts	0.23 to 3.14 Volts
6	Propagation Delay (From 50% RF to 50% TTL @ -10dBm (3dB Above Threshold)	20 nsec (Typ), 30 nsec (Max)	15.085 nsec (See Photo)
7	Recovery Time	150 nsec (Max)	18 nsec
8	Dynamic Range:	-30dBm to -10dBm	-33dBm to -6dBm
9	DC Supply:	±12VDC or ±15VDC @ +110mA to -40mA Max	+15VDC @ 75mA -15VDC @ 32mA



TYPICAL CHARACTERISTICS ON TD-6G18G-CD-SFF

VSWR Measured: 2.846:1

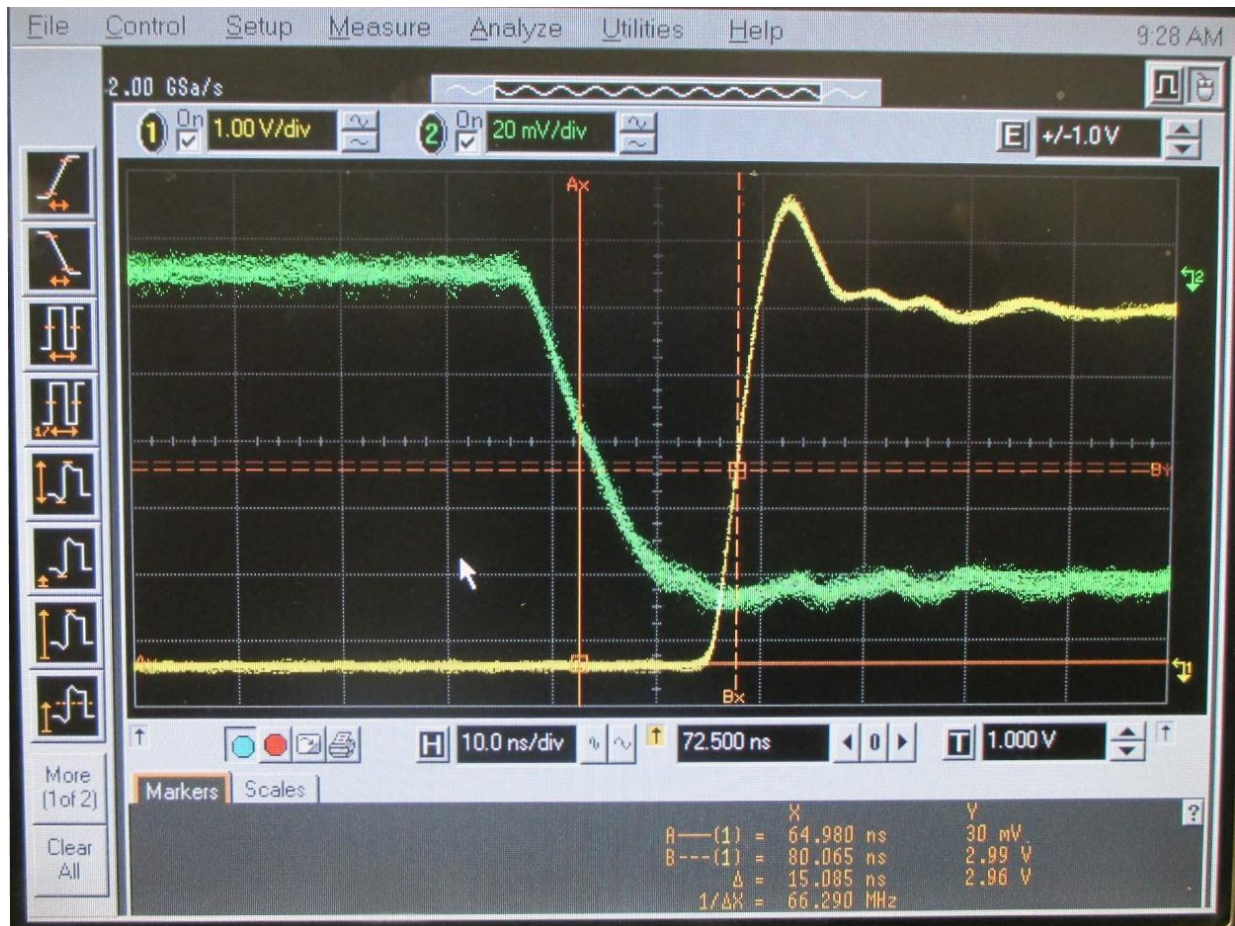
CH2: B -M 2.846 SWR
1.00 / REF 3.000 SWR





TYPICAL CHARACTERISTICS ON TD-6G18G-CD-SFF

Propagation Delay 15.085 ns
Full Pulse
10ns per Div. & 100ns Pulse Width



Green Trace = RF using a Crystal Detector (Neg) output.
Yellow Trace = TTL Output 1V per Div.