

DESCRIPTION

PMI MODEL NO.: TD-20T-5D4G5D9G-DIFF IS A THRESHOLD DETECTOR DESIGNED FOR THE 5.4 TO 5.9 GHz FREQUENCY RANGE. THIS UNIT HAS DIFFERENTIAL OUTPUT LOGIC.

SPECIFICATIONS

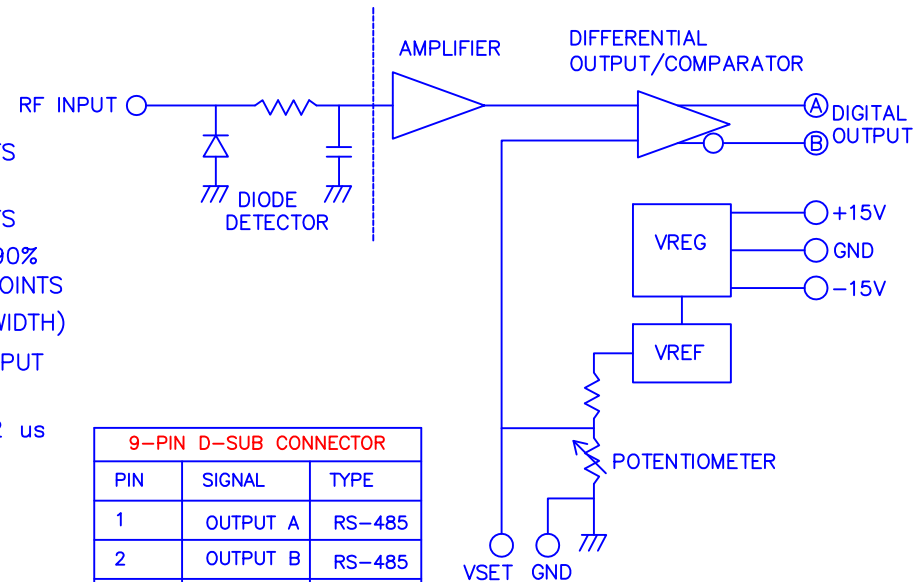
- FREQUENCY RANGE:..... 5.4 TO 5.9 GHz
- RF INPUT POWER LEVEL:..... -18 TO +2 dBm TYPICAL
- SURVIVAL INPUT POWER LEVEL:..... +17 dBm MAXIMUM
- MAXIMUM PULSE DURATION:..... 102.75 μ s MAXIMUM @ 8% DUTY CYCLE
MEASURED BETWEEN 50% RF ENVELOPE POINTS
- MINIMUM PULSE DURATION:..... 0.32 μ s MINIMUM @ 8% DUTY CYCLE
MEASURED BETWEEN 50% RF ENVELOPE POINTS
- PULSE RISE / FALL TIMES:..... 0.10 μ s MAXIMUM MEASURED FROM 10% TO 90%
AND BETWEEN 90% AND 10% RF ENVELOPE POINTS
- INSTANTANEOUS SIGNAL BW:..... 3.2 MHz MAXIMUM (320 ns MINIMUM PULSE WIDTH)
- DIGITAL OUTPUT SIGNAL:..... DIFFERENTIAL RS-485, OUTPUT HIGH WHEN INPUT
ABOVE THRESHOLD, A > B
- DIGITAL OUTPUT PERSISTENCE:..... OUTPUT HIGH SHALL PERSIST FOR 120 μ s $\pm$ 2 μ s
FROM INPUT SIGNAL PASSING THRESHOLD AND
PROPAGATION DELAY
- PROPAGATION DELAY TIME:..... 5 μ s MAXIMUM
- INPUT VSWR:..... 1.4 : 1 MAXIMUM FROM 4 TO 7 GHz
- THRESHOLD ADJUST:..... 25 TURN MECHANICAL POTENTIOMETER,
1 dB PER TURN MAX
- THRESHOLD LEVEL VSET:..... VOLTAGE REPORTING THRESHOLD SETTING
 $\pm$ 0.25 dB OVER FREQUENCY AND TEMPERATURE
- CONNECTORS:..... RF INPUT: SMA (F)
DIGITAL OUTPUT AND POWER: 9-PIN D-SUB MALE
- POWER SUPPLIES:..... +15VDC @ 150 mA MAXIMUM
-15VDC @ 100 mA MAXIMUM
- SIZE:..... 2.50" X 2.75" X 0.50" GOAL
4.00" X 3.00" X 0.50" MAXIMUM
- WEIGHT:..... 1 POUND MAXIMUM
- FINISH:..... PAINTED BLUE

ENVIRONMENTAL RATINGS

- TEMPERATURE:..... 0°C TO +50°C (OPERATING)
-50°C TO +70°C (STORAGE)
- HUMIDITY:..... MIL-STD-810G, METHOD 507.6, 95% NON-CONDENSING
- DUST:..... MIL-STD-810G, METHOD 510.6
- FUNGUS:..... MIL-STD-810G, METHOD 508.7
- AIR PRESSURE:..... MIL-STD-810G, 108.4 kPa HIGH, 87.0 kPa LOW (OPERATING)
19 kPa (NON-OPERATING)
- SHOCK:..... 20g ACCELERATION, 11ms HALF SINUSOID
- VIBRATION:..... MIL-STD-167-1A, TYPE 1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	PRELIMINARY	2/13/18	

BLOCK DIAGRAM



9-PIN D-SUB CONNECTOR		
PIN	SIGNAL	TYPE
1	OUTPUT A	RS-485
2	OUTPUT B	RS-485
3	SPARE	
4	-15VDC	VDC
5	+15VDC	VDC
6	SPARE	
7	SPARE	
8	SPARE	
9	GND1	GND

PMI CONFIDENTIAL AND PROPRIETARY

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

PLANAR MONOLITHICS INDUSTRIES, INC.

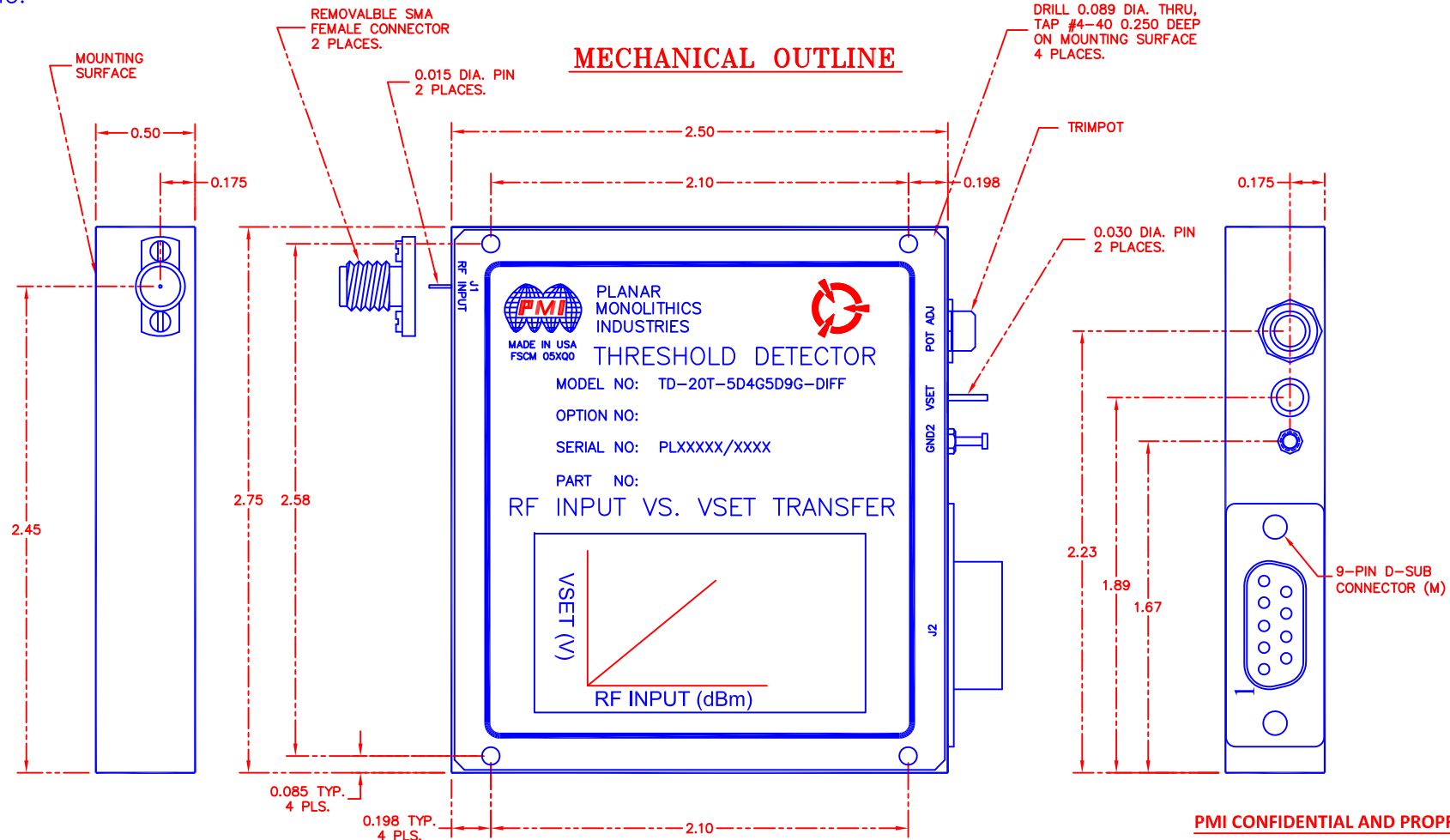
7311-G GROVE ROAD
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ISO 9001 CERTIFIED



APPROVALS		DATE		TITLE			
DRAWN		2/13/18		PRODUCT FEATURE			
CHECKED				TD-20T-5D4G5D9G-DIFF			
ISSUED				5.4 - 5.9 GHz THRESHOLD DETECTOR			
				SIZE	FSCM NO.	DWG NO.	REV.
				A	05XQ0	PRELIMINARY	1
				SCALE	N:S	SHEET	1 OF 2

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GOAL SIZE SHOWN, 4.00" X 3.00" X 0.50" MAX

SUSTAINABILITY

- MAINTAINER SKILL LEVEL: NO MAINTENANCE REQUIRED
- SUPPORTER SKILL LEVEL: SUPPORTED BY MANUFACTURER
- SUPPORT EQUIPMENT: NO ADDITIONAL SUPPORT EQUIPMENT REQUIRED
- SERVICEABILITY: NO CALIBRATION REQUIRED, SERVICED ONLY AT MANUFACTURER'S FACILITY

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

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SIZE		FSCM NO.		DWG NO.		REV.	
A		05XQ0		PRELIMINARY		1	
SCALE		N:S		SHEET		2 OF 2	