

DESCRIPTION:

PMI MODEL TD-218-RB-OPT618-N12DBM IS A THRESHOLD DETECTOR OPTIMIZED FOR THE 6 TO 18 GHz FREQUENCY RANGE. IT HAS AN INTERNALLY FIXED THRESHOLD LEVEL OF $-12\text{dBm} \pm 2\text{dBm}$ WITH A LOW TTL OUTPUT FOR SINGLE LEVELS BELOW THE THRESHOLD SETTING. THE THRESHOLD SETTING STABILITY IS CONSTANT $\pm 3.0\text{dB}$ OVER THE OPERATING TEMPERATURE AND FREQUENCY RANGE.

SPECIFICATIONS:

- OPERATING FREQUENCY: 6 GHz TO 18 GHz
- INPUT OPERATING RANGE: -20 dBm TO $+10\text{ dBm}$
- INPUT VSWR: 2.75:1 (2-18 GHz)
- THRESHOLD LEVEL: INTERNALLY FIXED TO $-12 \pm 2.0\text{ dBm}$ AT 12 GHz
- THRESHOLD SETTING STABILITY: $\pm 3.0\text{ dB}$ OVER THE OPERATING TEMPERATURE AND FREQUENCY RANGE
- MAXIMUM INPUT POWER: $+10\text{ dBm}$ (WITHOUT DAMAGE)
- DETECTED OUTPUT: THE DETECTED OUTPUT SIGNAL SHALL BE A TTL LEVEL HIGH WHEN THE RF SIGNAL APPLIED TO THE RF INPUT EXCEEDS THE THRESHOLD LEVEL. ANY SIGNALS BELOW THE THRESHOLD LEVEL SHALL RESULT IN AN OUTPUT LEVEL OF TTL LOW (0) THE TTL OUTPUT SHALL BE BUFFERED IN SUCH A WAY THAT OUTPUT LOADING HAS NO EFFECT ON DETECTOR RESPONSE. THE DETECTED OUTPUT SHALL HAVE A DRIVE CAPACITY OF AT LEAST TWO STANDARD TTL LOADS.
- RESPONSE TIME: FOR ANY RF INPUT GREATER THAN 3 dB ABOVE THRESHOLD, THE MAXIMUM TURN ON RESPONSE TIME MEASURED AT 90% RF TO A TTL "1" OUTPUT SHALL BE 100 ns. THE MAXIMUM TURN OFF RESPONSE TIME MEASURED AT 10% RF TO A TTL "0" SHALL BE 100 ns.
- CONNECTORS: THE INPUT SIGNAL CONNECTOR SHALL BE AN SMA FEMALE IN ACCORDANCE WITH MIL-C-39012. THE OUTPUT SIGNAL CONNECTION SHALL BE A SODERABLE PIN ($\phi 0.020$ " MINIMUM) WITH A GROUND LUG NEXT TO IT. THE POWER CONNECTION SHALL BE A SOLDERABLE PIN ($\phi 0.020$ " MINIMUM).
- POWER SUPPLY VOLTAGE: $+15\text{V} @ 250\text{ mA}$ MAXIMUM
- SIZE: 1.50" (L) x 1.50" (W) x 0.50" (H)
- WEIGHT: 2.0 OUNCES
- FINISH: GRAY EPOXY POLIMIDE COATING IAW MIL-C-22750, TYPE I OVER EPOXY POLIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

ENVIRONMENTAL RATINGS:

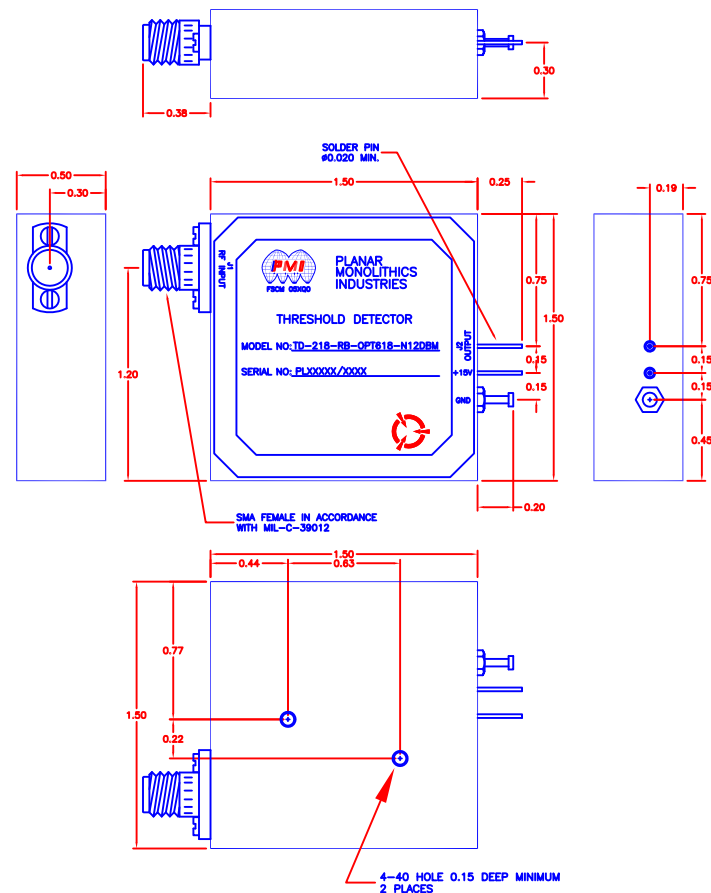
- TEMPERATURE: -55°C TO $+85^{\circ}\text{C}$ (OPERATING)
..... -65°C TO $+125^{\circ}\text{C}$ (NON-OPERATING)
- HUMIDITY: MIL-STD-202F, METHOD 103B CONDITION B
- SHOCK: MIL-STD-202F, METHOD 213B CONDITION B
- VIBRATION: MIL-STD-202F, METHOD 204D CONDITION B
- ALTITUDE: MIL-STD-202F, METHOD 105C CONDITION B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D CONDITION A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ALL DIMENSIONS ARE IN INCHES
TOLERANCES:

X.XX ± 0.020
X.XXX ± 0.010

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	—	PRELIMINARY	9/17/15	KM



PMI CONFIDENTIAL AND PROPRIETARY

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APPROVALS		DATE		TITLE	
DRAWN K. MASON		9/17/15		PRODUCT FEATURE TD-218-RB-OPT618-N12DBM	
CHECKED				6 TO 18 GHz THRESHOLD DETECTOR	
ISSUED				PRELIMINARY	
SIZE A		FSCM NO. 05XQ0		DWG NO. PRELIMINARY	
SCALE N:S				SHEET 1 OF 1	