

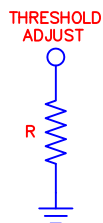
## DESCRIPTION

PMI MODEL TD-30T-518-FC-HS IS A HIGH SPEED THRESHOLD DETECTOR DESIGNED TO OPERATE OVER THE 5 TO 18 GHz FREQUENCY RANGE. IT HAS AN EXTERNAL ADJUSTMENT TO VARY THE THRESHOLD LEVEL FROM -10 dBm TO -20 dBm, WITH AN INPUT FLATNESS OF TYPICALLY  $\pm 1.0$  dB AND VSWR OF LESS THAN 3.0:1. THIS UNIT COMES IN A VERY SMALL SIZE WITH FIELD REMOVABLE SMA CONNECTORS FOR SURFACE MOUNTING OR TYPICAL COAXIAL CONNECTION.

## SPECIFICATIONS

- FREQUENCY RANGE: 5 GHz TO 18 GHz
- VSWR: 3:1 MAXIMUM @ -20 dBm
- THRESHOLD ADJ. RANGE: -20 dBm TO -10 dBm
- INPUT FLATNESS:  $\pm 2.0$  dB MAXIMUM
- MAXIMUM INPUT POWER: +17 dBm CW
- THRESHOLD STABILITY:  $\pm 2.0$  dB MAX. OVER FREQUENCY AND TEMP.
- RESPONSE TIME: 100 ns MAXIMUM
- OUTPUT: TTL
- POWER SUPPLY: +15V @ 100 mA MAXIMUM
- CONNECTORS:
  - RF INPUT: SMA (FEMALE)
  - OUTPUT: SMA (FEMALE)/SOLDER PIN
  - THRESHOLD ADJUST: SOLDER PIN
  - DC POWER: SOLDER PIN
- SIZE: 0.80" x 0.62" x 0.40"
- OPERATING TEMPERATURE: -40°C TO +85°C
- WEIGHT: 0.50 OUNCE
- 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.

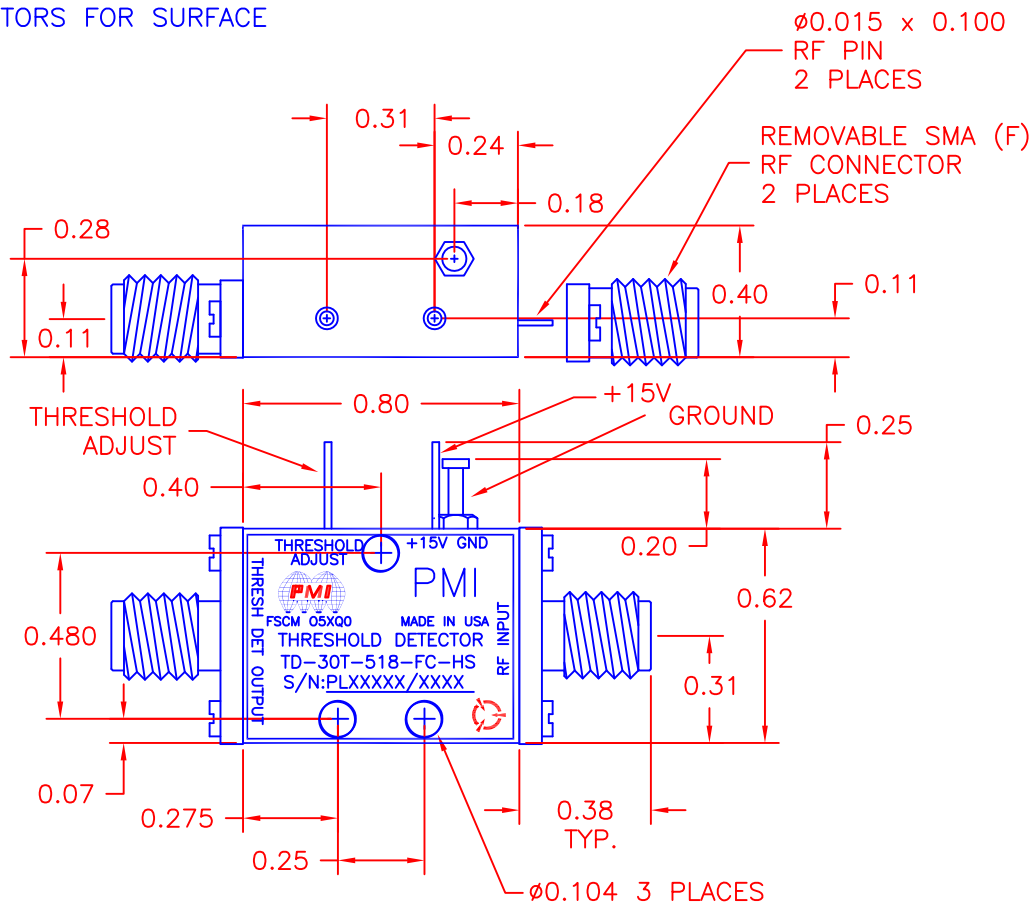
NOTE: THE THRESHOLD ADJUST PIN REQUIRES AN EXTERNAL RESISTOR TO GROUND. RESISTOR VALUES FOR -20 dBm AND -10 dBm WILL BE SUPPLIED WITH THE FINAL DATASHEET.



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

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
X.XX  $\pm 0.020$   
X.XXX  $\pm 0.010$

| REVISIONS |      |                  |        |
|-----------|------|------------------|--------|
| ZONE      | REV. | DESCRIPTION      | DATE   |
|           | 1    | ORIGINAL RELEASE | 5/4/17 |
|           |      |                  |        |



PMI CONFIDENTIAL AND PROPRIETARY

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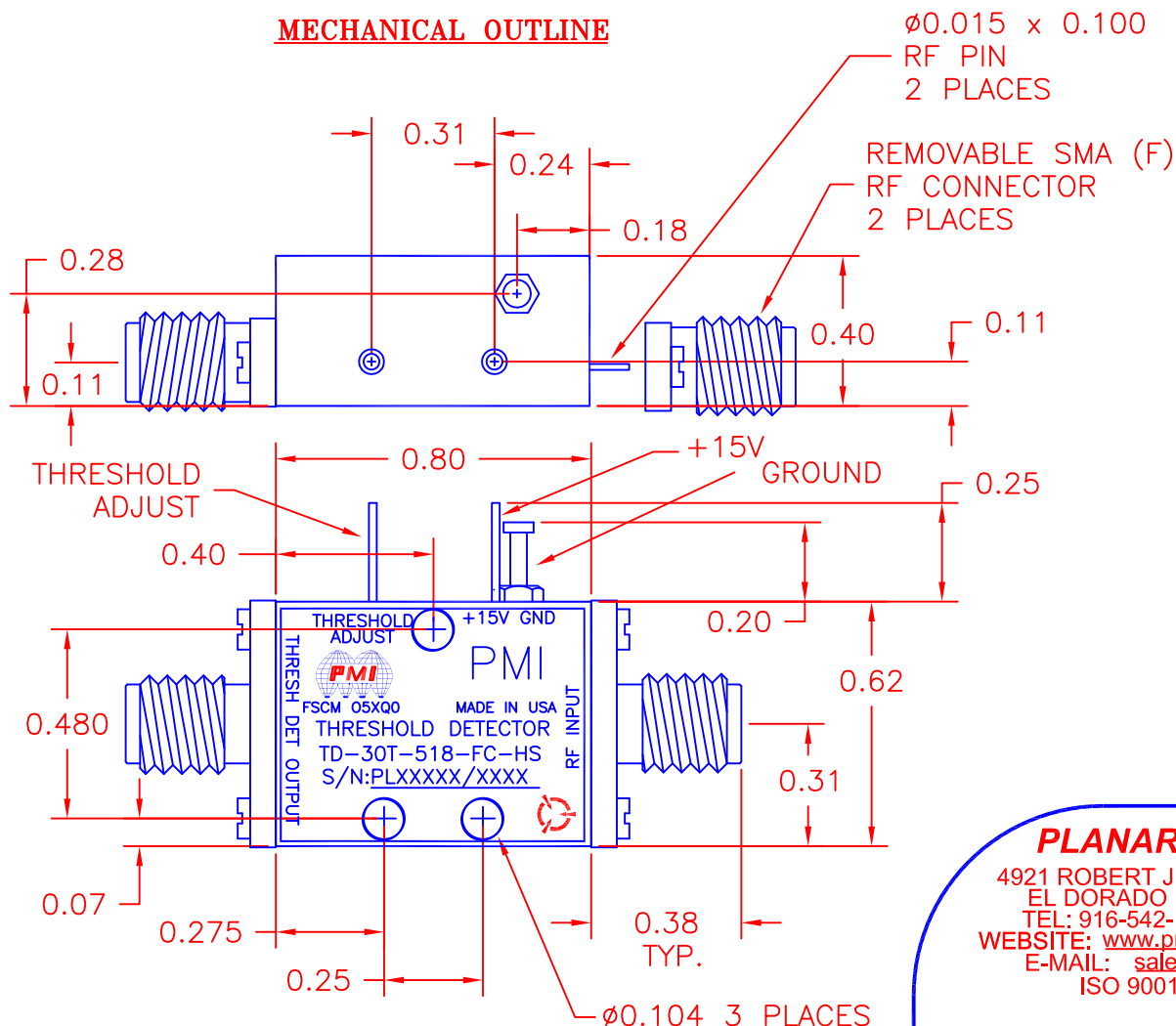
| APPROVALS |  | DATE   |  | TITLE                         |          |             |        |
|-----------|--|--------|--|-------------------------------|----------|-------------|--------|
| DRAWN     |  | 5/4/17 |  | PRODUCT FEATURE               |          |             |        |
| CHECKED   |  |        |  | TD-30T-518-FC-HS              |          |             |        |
| ISSUED    |  |        |  | 5 - 18 GHz THRESHOLD DETECTOR |          |             |        |
|           |  |        |  | SIZE                          | FSCM NO. | DWG NO.     | REV.   |
|           |  |        |  | A                             | 71A34    | PRELIMINARY | 1      |
|           |  |        |  | SCALE                         | N:S      | SHEET       | 1 OF 3 |

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|-----------|------|------------------|--------|
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|           |      |                  |        |

## MECHANICAL OUTLINE



ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
X.XX  $\pm 0.020$   
X.XXX  $\pm 0.010$

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| APPROVALS |  | DATE   |  | TITLE                         |          |             |        |
|-----------|--|--------|--|-------------------------------|----------|-------------|--------|
| DRAWN     |  | 5/4/17 |  | MECHANICAL OUTLINE            |          |             |        |
| CHECKED   |  |        |  | TD-30T-518-FC-HS              |          |             |        |
| ISSUED    |  |        |  | 5 - 18 GHz THRESHOLD DETECTOR |          |             |        |
|           |  |        |  | SIZE                          | FSCM NO. | DWG NO.     | REV.   |
|           |  |        |  | A                             | 71A34    | PRELIMINARY | 1      |
|           |  |        |  | SCALE                         | N:S      | SHEET       | 2 OF 3 |

## DESCRIPTION

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| ZONE      | REV. | DESCRIPTION      | DATE   |
|           | 1    | ORIGINAL RELEASE | 5/4/17 |
|           |      |                  |        |

## ENVIRONMENTAL SPECIFICATIONS

- ALTITUDE (LOW PRESSURE) \_\_\_\_\_ PER: MIL-810F, METHOD-500.4 PROCEDURE-II
- HIGH TEMPERATURE - STORAGE/OPERATING \_\_\_\_\_ 35°C TO 85°C
- LOW TEMPERATURE - STORAGE \_\_\_\_\_ PER: MIL-810F, METHOD-502.4 PROCEDURE-I
- LOW TEMPERATURE - OPERATING \_\_\_\_\_ PER: MIL-810F, METHOD-502.4 PROCEDURE-II
- THERMAL SHOCK \_\_\_\_\_ PER: MIL-810F, METHOD-503.4
- RAIN-DRIP TEST \_\_\_\_\_ PER: MIL-810F, METHOD-506.4 PROCEDURE-II
- HUMIDITY \_\_\_\_\_ PER: MIL-810F, METHOD-507.4 PROCEDURE-III
- FUNGUS (MOLD GROWTH) \_\_\_\_\_ PER: MIL-810F, METHOD-508.5
- SALT FOG \_\_\_\_\_ PER: MIL-810F, METHOD-509.4
- ACCELERATION - FUNCTIONAL \_\_\_\_\_ PER: MIL-810F, METHOD-513.5 PROCEDURE-I & II
- ACCELERATION - STRUCTURAL \_\_\_\_\_ PER: MIL-810F, METHOD-513.5 PROCEDURE-I & II
- RANDOM VIBRATION - FLIGHT ENVELOPE \_\_\_\_\_ PER: MIL-810F, METHOD-514.5 PROCEDURE-I
- SINUSOIDAL VIBRATION - FLIGHT ENVELOPE \_\_\_\_\_ PER: MIL-810F, METHOD-514.5 PROCEDURE-I
- SHOCK - FUNCTIONAL (SHOCK PULSE TEST) \_\_\_\_\_ PER: MIL-810F, METHOD-516.5 PROCEDURE-I
- TRANSIT DROP \_\_\_\_\_ PER: MIL-810F, METHOD-516.5 PROCEDURE-IV
- BENCH HANDLING \_\_\_\_\_ PER: MIL-810F, METHOD-516.5 PROCEDURE-IV
- ARRESTOR LANDING \_\_\_\_\_ PER: MIL-810F, METHOD-516.5 PROCEDURE-VIII
- COMBINED TEMP., HUMIDITY, & ALTITUDE (CATH) \_\_\_\_\_ PER: MIL-810F, METHOD-520.2 PROCEDURE-III
- GUN FIRE VIBRATION \_\_\_\_\_ PER: MIL-810F, METHOD-519.5
- SOLAR RADIATION (ACTINIC EFFECT) \_\_\_\_\_ PER: MIL-810F, METHOD-505.4 PROCEDURE-II
- BLOWING RAIN \_\_\_\_\_ PER: MIL-810F, METHOD-506.4 PROCEDURE-I
- SAND & DUST \_\_\_\_\_ PER: MIL-810F, METHOD-510.4 PROCEDURE-I & II
- FLUID CONTAMINATION \_\_\_\_\_ PER: MIL-810F, METHOD-504.1
- ICING/FREEZING RAIN \_\_\_\_\_ PER: MIL-810F, METHOD-521.2 PROCEDURE-I

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|                 |  |        |  |          |             |        |
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| APPROVALS       |  | DATE   | TITLE  |          |             |        |
| DRAWN <i>WJ</i> |  | 5/4/17 | PRODUCT FEATURE<br>TD-30T-518-FC-HS<br>5 - 18 GHz THRESHOLD DETECTOR |          |             |        |
| CHECKED         |  |        | SIZE   | FSCM NO. | DWG NO.     | REV.   |
| ISSUED          |  |        | A  | 71A34    | PRELIMINARY | 1      |
|                 |  |        | SCALE  | N:S      | SHEET       | 3 OF 3 |