

## DESCRIPTION

PMI MODEL DVAT-0518-60-8-SK-193 IS A 0.5 TO 18.0 GHz VARIABLE ATTENUATOR/MODULATOR WITH 8 BIT BINARY TTL CONTROL OR OPTIONAL ANALOG VOLTAGE CONTROL.

## SPECIFICATIONS

- FREQUENCY RANGE: 0.5 to 18.0 GHz
- INSERTION LOSS: 5.25dB MAXIMUM
- ATTENUATION FLATNESS:
  - @ 10 dB =  $\pm 0.9$  dB
  - @ 20 dB =  $\pm 1.5$  dB
  - @ 40 dB =  $\pm 3.0$  dB
  - @ 60 dB =  $\pm 5.0$  dB
- ATTENUATION ACCURACY:
  - 0-30 dB =  $\pm 1.0$  dB
  - 30-50 dB =  $\pm 1.3$  dB
  - 50-60 dB =  $\pm 1.5$  dB
- MONOTONICITY: GUARANTEED
- TEMPERATURE VARIATION:
  - $\pm 2.5$ dB -10 to 85 deg C Typ
  - $\pm 3.5$ dB -40 to 95 deg C Typ
- SWITCHING TIME: 5  $\mu$ s MAXIMUM
- SMALL SIGNAL BANDWIDTH: 100 kHz Typ ( 6dB with  $\pm 3$  dB sinewave )
- LARGE SIGNAL BANDWIDTH: 50 kHz Typ ( 30dB with  $\pm 30$  dB sinewave )
- RETURN LOSS: -12 dB TYP -8.5 dB MAX
- POWER RATING: +20 dBm
- DIGITAL CONTROL: 8 BIT TTL
- ANALOG CONTROL option: 0-6V ANALOG VOLTAGE, 10dB/VOLT
- POWER SUPPLY: +12V TO +15V @ 150 mA MAXIMUM
- NEGATIVE SUPPLY IS OPTIONAL: 0 TO -15V @ 2 mA MAXIMUM (may be omitted)
- CONNECTORS:
  - RF INPUT/OUTPUT: FIELD REPLACEABLE SMA (FEMALE)
  - POWER AND CONTROLS: 15 PIN MICRO-D FEMALE
- SIZE: 2.00" x 1.81" x 0.50"
- FINISH: PAINTED BLUE

## ENVIRONMENTAL RATINGS

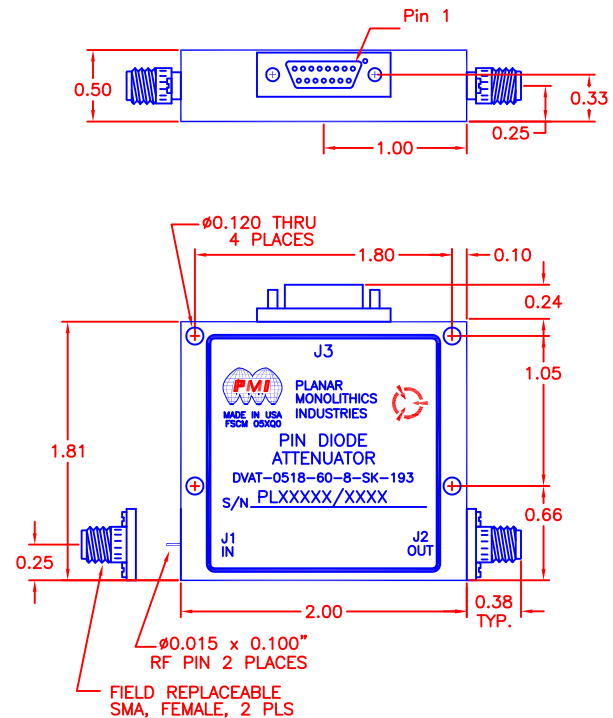
- TEMPERATURE: -40°C TO + 85°C (OPERATING)  
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

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    |
|           | A1   | ORIGINAL RELEASE | 4/26/18 |
|           |      |                  |         |

## MECHANICAL OUTLINE



PMI CONFIDENTIAL AND PROPRIETARY

## PLANAR MONOLITHICS INDUSTRIES, INC.

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ISO 9001 CERTIFIED

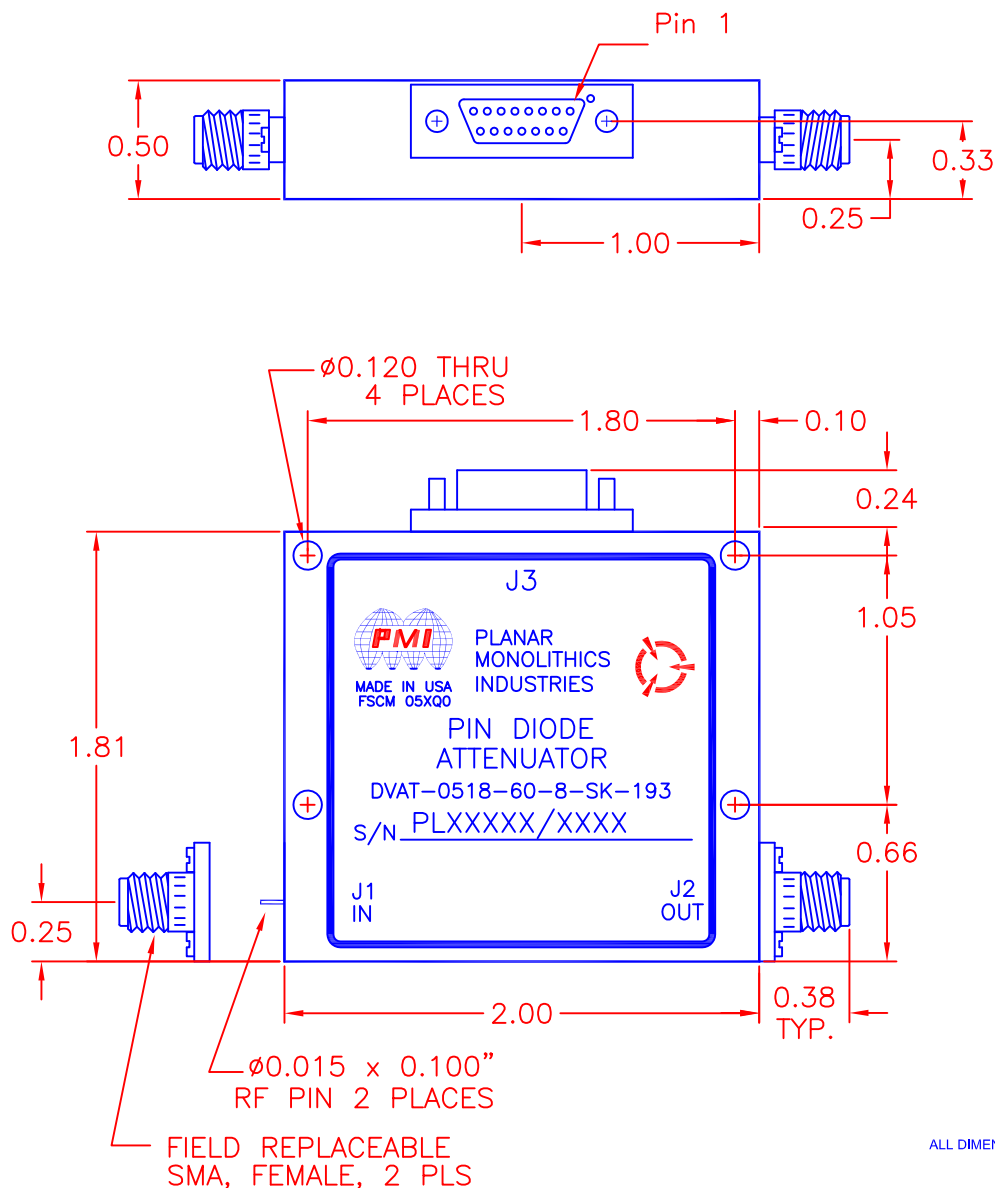


| APPROVALS |  | DATE    |  | TITLE                 |          |          |        |
|-----------|--|---------|--|-----------------------|----------|----------|--------|
| DRAWN     |  | 2/17/12 |  | PRODUCT FEATURE       |          |          |        |
| REDRAWN   |  | 3/19/18 |  | DVAT-0518-60-8-SK-193 |          |          |        |
| ISSUED    |  |         |  | SIZE                  | FSCM NO. | DWG NO.  | REV.   |
|           |  |         |  | A                     | 05XQ0    | 27035041 | A1     |
|           |  |         |  | SCALE                 | N:S      | SHEET    | 1 OF 2 |

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TOLERANCES:  
X.XX ±0.020  
X.XXX ±0.010

| REVISIONS |      |                  |         |
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| 8 BIT TRUE BINARY LOGIC |            |           |
|-------------------------|------------|-----------|
| J3 PIN FUNCTIONS        |            |           |
| PIN NO.                 | FUNCTIONS. | ATNT1 PIN |
| 1                       | 2.0 dB     | CP105     |
| 2                       | 1.0 dB     | CP106     |
| 3                       | 0.5 dB     | CP107     |
| 4                       | 0.25 dB    | CP108     |
| 5                       | GND        | CP303     |
| 6                       | N/C        | CP109     |
| 7                       | N/C        | CP100     |
| 8                       | SPARE      | CP110     |
| 9                       | NC         | CP111     |
| 10                      | -V         | CP301     |
| 11                      | +V         | CP300     |
| 12                      | 32.0 dB    | CP101     |
| 13                      | 16.0 dB    | CP102     |
| 14                      | 8.0 dB     | CP103     |
| 15                      | 4.0 dB     | CP104     |

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|                      |                |                                                       |                   |                     |            |  |
|----------------------|----------------|-------------------------------------------------------|-------------------|---------------------|------------|--|
|                      |                | TITLE<br><br>PRODUCT FEATURE<br>DVAT-0518-60-8-SK-193 |                   |                     |            |  |
| APPROVALS            | DATE           |                                                       |                   |                     |            |  |
| DRAWN<br><i>JJS</i>  | <i>2/17/12</i> |                                                       |                   |                     |            |  |
| REDRAWN<br><i>EW</i> | <i>3/19/18</i> | SIZE<br>A                                             | FSCM NO.<br>05XQ0 | DWG NO.<br>27035041 | REV.<br>A1 |  |
| ISSUED               |                | SCALE<br>N:S                                          |                   | SHEET<br>2          | OF 2       |  |