

# THERMOPAD<sup>®</sup>

## TEMPERATURE VARIABLE ATTENUATOR



DATA SHEET

PART SERIES: WTVAXX00NXXSMT

SHEET 1 OF 2  
Dwg 1013075

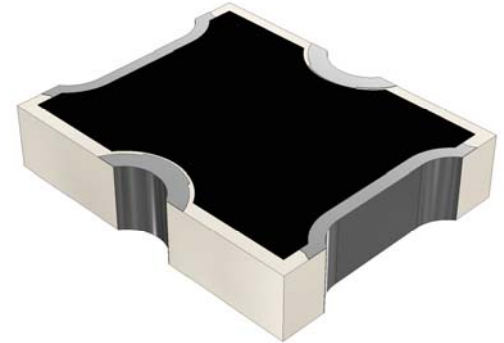
EN 16-1146  
Revision B

### FEATURES

- Temperature Variable
- Compact Package
- Wideband Performance
- Passive Gain Compensation
- Rugged Construction
- MIL-PRF-3933

### APPLICATIONS

- Power Amplifiers
- Instrumentation
- Mobile Networks
- Point-to-Point Radios
- Satellite Communications
- Military Radios
- Up/Down Converters

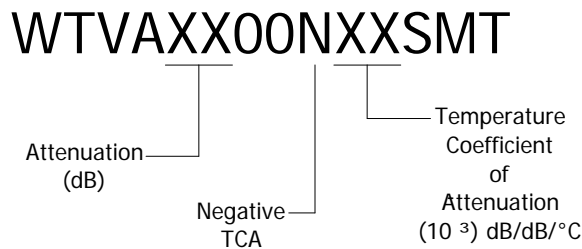


### GENERAL DESCRIPTION

EMC Technology is the leading authority in temperature variable attenuators. Thermopad<sup>®</sup> temperature variable attenuators have been a highly reliable passive solution for over temperature gain compensation for more than 20 years. All Thermopad<sup>®</sup> products can be qualified for high-reliability and space applications.

### ORDERING INFORMATION

#### Part Identifier:



### SPECIFICATIONS

#### 1.0 ELECTRICAL

Nominal Impedance:	50 ohms
Frequency Range:	DC – 20 GHz
Power Rating:	200 MilliWatts CW
Attenuation Values Available:	2 – 10 dB
Attenuation Accuracy @ 25°C:	± 0.5 dB @ DC – 15 GHz ± 1.0 dB @ 15 – 20 GHz
VSWR @ 25°C:	1.40:1 Typical @ DC – 20 GHz 1.70:1 Max @ DC – 20 GHz
Peak Power:	2 W (10 μs pulse width, 1 % duty cycle)

#### 2.0 ENVIRONMENTAL

Operating Temperature:	-55°C to +150°C
Non-operating Temperature:	-65°C to +150°C
Temperature Coefficient:	± 0.001 dB/dB/C

#### 3.0 MARKING

Unit Marking: None

#### 4.0 QUALITY ASSURANCE

Sample Inspect Per ANSI/ASQC Z1.4 General Inspection, Level II, AQL=1.0.

1. Visual and Mechanical Examination for Conformance to Outline Drawing Requirements

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- Sample Inspection (Destructive Testing).
- Select three (3) units from lot and measure DCA every 20°C over the temperature range of -55°C to +125°C; Calculate using linear regression, the slope of the curve.
  - Calculate TCA using the following formula:

$$TCA = \frac{\text{Slope}}{\text{Attenuation @ 25}^\circ\text{C}}$$

- Inspection in accordance with 824W170 and 824F036, for commercial grade product.
- Test Data Requirements:  
No Data Required for Customer  
Data Retention – 24 Months

### 5.0 PACKAGING

Standard:

Tape and Reel

### 6.0 MECHANICAL

Substrate Material:

Alumina

Terminal Material:

Thick Film, Nickel Barrier Solder Plate

Ground Plane:

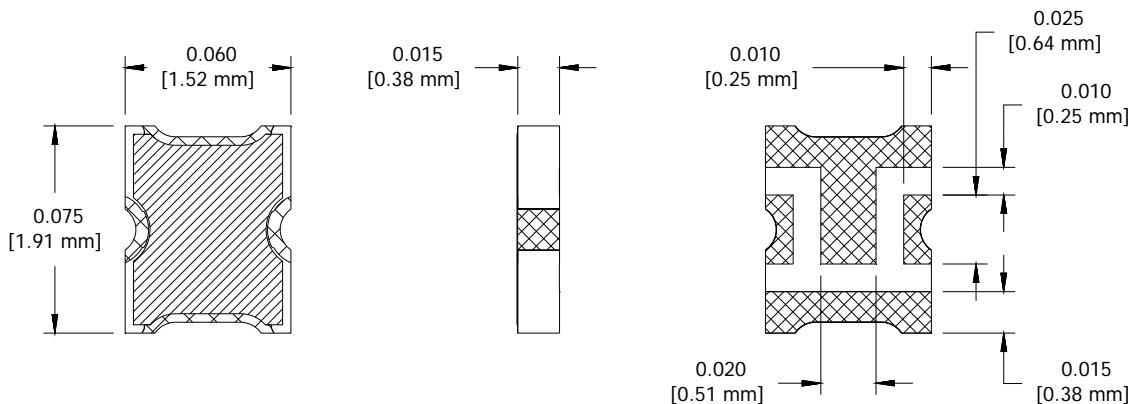
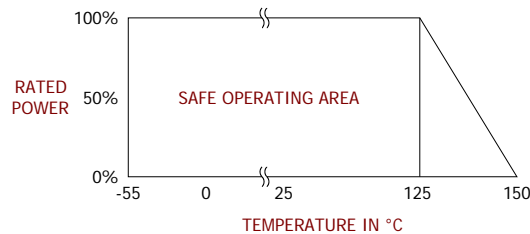
Thick Film

Resistive Element:

Thick Film

Metric Dimensions:

Provided for reference only



Unless Otherwise Specified: TOLERANCE: X.XX = ± 0.01 X.XXX = ± 0.005