

# ATTENUATOR TEMPERATURE VARIABLE



DATA SHEET

PART SERIES: TVAXX00XXXW1S

SHEET 1 OF 2  
Dwg 1008115

EN 16-0736  
Revision F

## 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

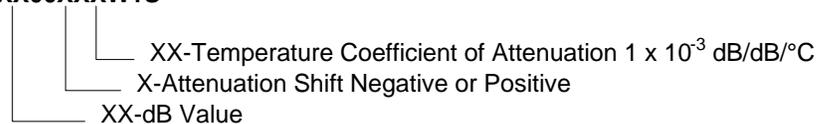


## GENERAL DESCRIPTION

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:** TVAXX00XXXW1S



## SPECIFICATIONS

### 1.0 ELECTRICAL

Nominal Impedance:	50 ohms
Frequency Range:	DC-6 GHz
Attenuation Values Available:	1-10 dB in 1 dB increments
Attenuation Accuracy:	@ 25°C: $\pm 0.5$ dB @ 1 GHz
VSWR:	1.30:1 Max @ 1 GHz
Input Power	Negative Shifting: 2 watts cw. Positive Shifting: 0.25 watts cw. Full Rated Power to 125°C, Derated Linearly to 0 watts @ 150°C.
Temperature Coefficient of Attenuation:	0.003, -0.004, -0.005, -0.006, -0.007, and -0.009 dB/dB/°C 0.003, 0.005, 0.006, and 0.007 dB/dB/°C
Temperature Coefficient Tolerance:	$\pm 0.001$ dB/dB/°C

### 2.0 ENVIRONMENTAL

Operating Temperature:	-55°C to +150°C
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### 3.0 MARKING

Unit Marking:	None
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### 4.0 QUALITY ASSURANCE

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

Visual and Mechanical Examination for Conformance to Outline Drawing Requirements

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.

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Calculate TCA using the following formula:

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

Inspection in accordance with 824W107

Test Data Requirements:

No Data Required for Customer

Data Retention – 24 Months

## 5.0 PACKAGING

Standard:

Tape & Reel

## 6.0 MECHANICAL

Substrate Material:

Alumina, 96% MIL-I-10

Terminal Material:

Thick Film, Nickel Barrier, Solder Coated

Workmanship

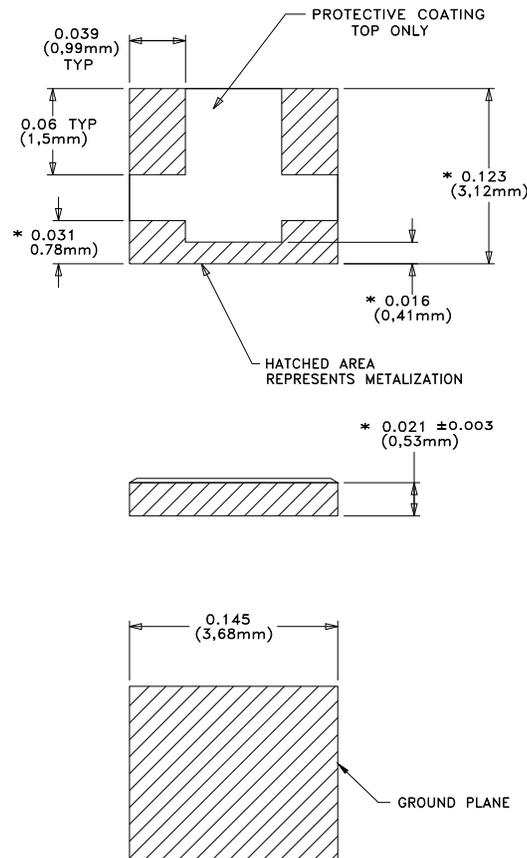
Per MIL-PRF-55342

Resistive Element:

Thick Film

Metric Dimensions:

Provided for reference only



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

DIMENSIONS APPLY BEFORE SOLDER ALLOW 0.015 MAX FOR PRETINNED SURFACES