

# ATTENUATOR TEMPERATURE VARIABLE CHIP (K-BAND)



DATA SHEET

PART SERIES: KTVAXXNXXXSMTF

SHEET 1 OF 3  
Dwg 1012425

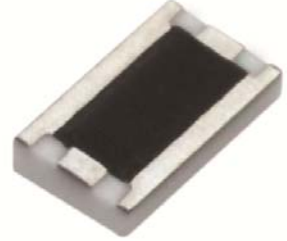
EN 16-0519  
Revision C

## 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

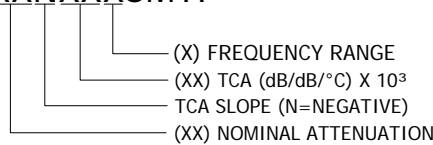


## GENERAL DESCRIPTION

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: KTVAXXNXXXSMTF



## SPECIFICATIONS

### 1.0 ELECTRICAL

Nominal Impedance: 50 ohms  
Frequency Range: 5=18-27GHz, 6=27-36GHz  
Attenuation Values Available: 2-6dB in 1dB increments  
Attenuation Accuracy: @ 25°C: ± 1.0 dB  
VSWR: 1.50:1 Maximum  
Input Power: 100 mW @ 100°C, Derated linearly to 0 Watt @ 150°C  
Temperature Coefficient of Attenuation: -0.003, -0.005, -0.006 and -0.007 dB/dB/°C  
Temperature Coefficient Tolerance: ±0.001dB/dB/°C Note: -0.007 ±0.002

### 2.0 ENVIRONMENTAL

Operating Temperature: -55°C to +150°C  
Storage Temperature: -55°C to +150°C

### 3.0 MARKING

Unit Marking: Attenuation Value and Shift

### 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.

Calculate TCA using the following formula:

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

Inspection in accordance with 824W107

Test Data Requirements:

No Data Required for Customer

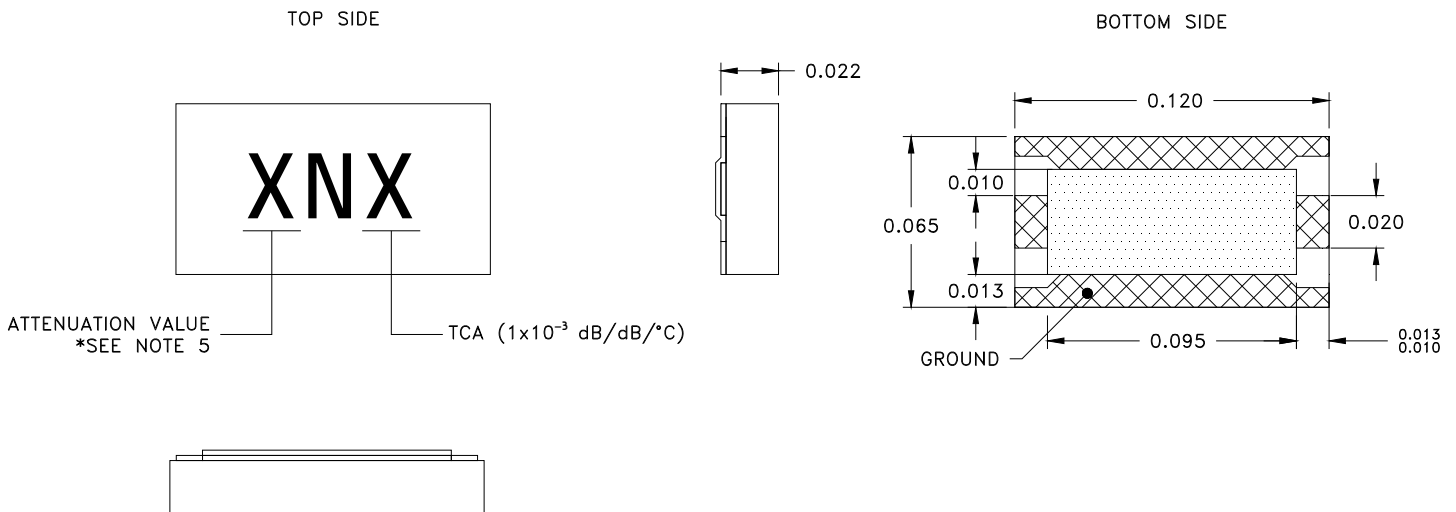
Data Retention – 24 Months

## 5.0 PACKAGING

Standard: Waffle

## 6.0 MECHANICAL

Substrate Material: Alumina, MIL-I-10  
Terminal Material: Thick Film, Nickel Barrier, Silver Plated  
Workmanship: PER MIL-PRF-55342  
Resistive Element: Thick Film  
Metric Dimensions: Provided for reference only



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

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## 7.0 LAND PATTERN

Part Number	Inches					mm				
	A	B	C	D	W	A	B	C	D	W
KTVAXXNXXXSMTF	0.020	0.010	.095	0.039	0.013	0.51	0.25	2.41	1.01	0.32

