ATTENUATOR
TEMPERATURE VARIABLE CHIP (K-BAND)

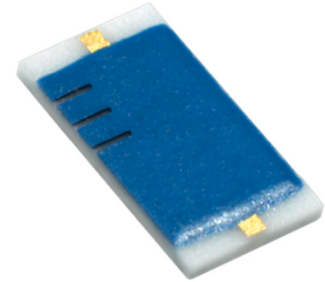## FEATURES

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® temperature variable attenuators have been a highly reliable passive solution for over temperature gain compensation for more than 20 years. All Thermopad® products can be qualified for high-reliability and space applications.

ORDERING INFORMATION

Part Identifier: KTVAXX00NXXXF

(X) FREQUENCY RANGE
(XX) TCA (dB/dB/°C) X 10³
TCA SLOPE (N=NEGATIVE)
(XX) NOMINAL ATTENUATION
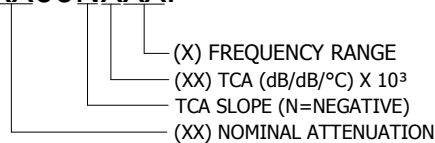
SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance:	50 ohms
Frequency Range:	1=16-22GHz, 2=18-32GHz, 3=28-31GHz, 4=32-36GHz, 5=16-36GHz
Attenuation Values Available:	2-6dB in 1dB increments
Attenuation Accuracy:	@ 25ºC: ± 1.0 dB
VSWR:	1.35:1 Typical
Input Power	100 mW
Temperature Coefficient of Attenuation:	-0.005, -0.006 and -0.007 dB/dB/ºC
Temperature Coefficient Tolerance:	Min – 0.004 dB/dB/ºC

2.0 ENVIRONMENTAL

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

3.0 MARKING

Unit Marking:	Vertical "I" for each dB. I.E. 3dB="III"

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 20ºC 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:

$$TCA = \frac{Slope}{Attenuation\ @\ 25°C}$$

Inspection in accordance with 824W107
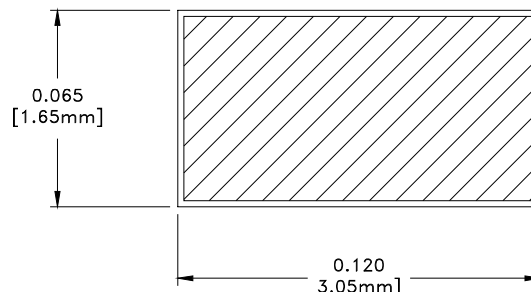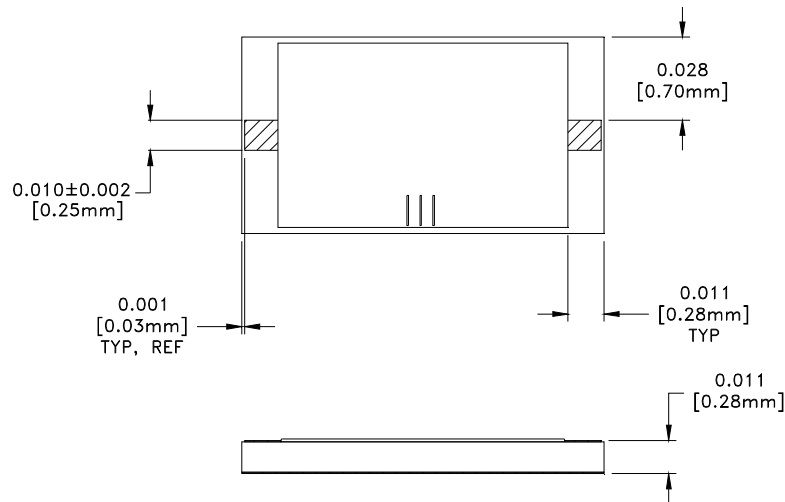
Test Data Requirements:

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, Bondable Gold

Workmanship   PER MIL-PRF-55342

Ground Plane: Thick Film

Resistive Element: Thick Film

Metric Dimensions: Provided for reference only

0.028
[0.70mm]

0.010±0.002
[0.25mm]

0.001
[0.03mm]
TYP, REF

0.011
[0.28mm]
TYP

0.011
[0.28mm]

0.065
[1.65mm]

0.120
3.05mm]

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

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                    Specifications are Subject to Change Without Notice   *AS 9100, ISO 9001 and 14001 Certified*