

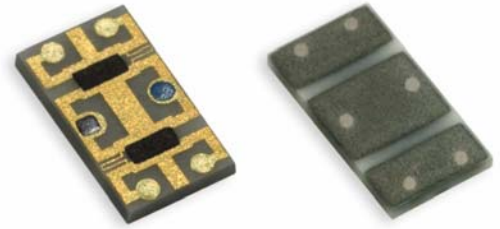
ATTENUATOR TEMPERATURE VARIABLE

FEATURES

- Temperature Variable
- Compact Package
- Wideband Performance
- Passive Gain Compensation
- Rugged Construction
- MIL-PRF-55342
- Wirebond Based Mounting

APPLICATIONS

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

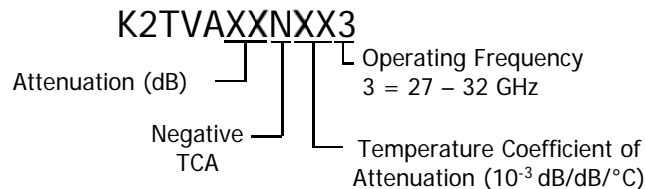


GENERAL DESCRIPTION

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:



SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance:	50 ohms
Frequency Range:	27 – 32 GHz
Attenuation Values Available:	3 – 6 dB in one dB increments
Attenuation Accuracy:	± 0.5 dB Typical, ± 1.0 dB Max
VSWR:	1.25:1 Typical; 1.40:1 Max
Input Power	200 Milliwatts
Temperature Coefficient of Attenuation:	-0.005 and -0.007 dB/dB/°C
Temperature Coefficient Tolerance:	± 0.001 dB/dB/°C Typical, ± 0.002 dB/dB/°C Max

2.0 ENVIRONMENTAL

Operating Temperature:	-55°C to +150°C
Non-operating Temperature:	-65°C to +150°C
Temperature Coefficient:	± 200 PPM / °C Max

3.0 MARKING

Unit Marking:	Dot Marking See Table
---------------	-----------------------

ATTENUATOR TEMPERATURE VARIABLE

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 attenuation from 27-32 GHz 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:

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

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

Terminal Material:

Thick Film Bondable Gold

Ground Plane:

Solderable Gold

Resistive Element:

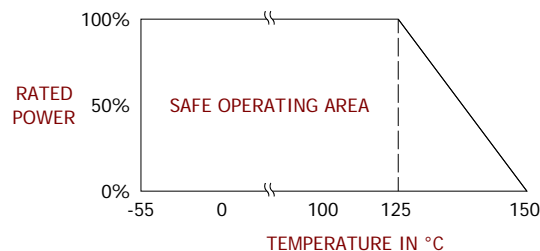
Thick Film

Workmanship:

PER MIL-PRF-55342

Metric Dimensions:

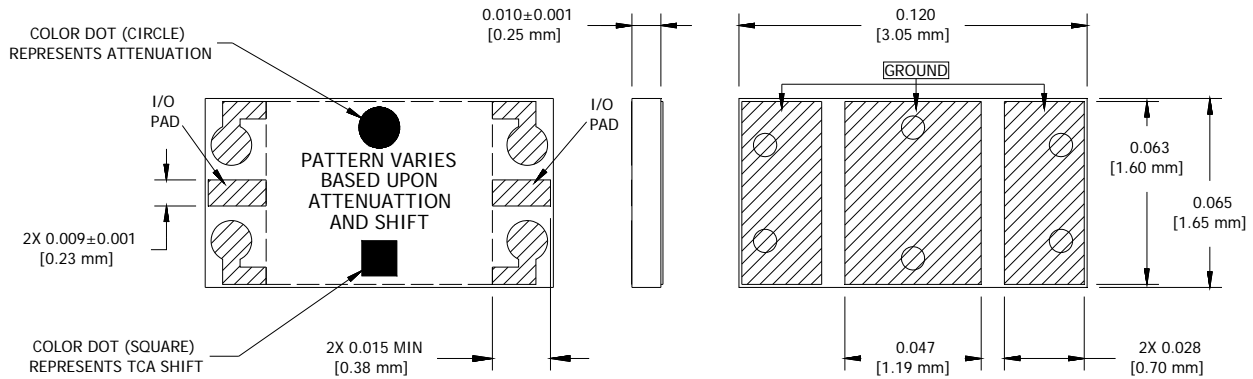
Provided for reference only



ATTENUATOR TEMPERATURE VARIABLE

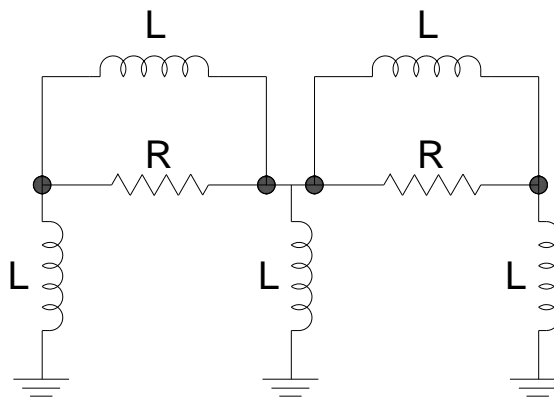
7.0 SUGGESTED MOUNTING

Refer to Application Note AN006 Figure 7, for Recommended Mounting Instructions.



COLOR DOT CODE TABLE		
COLOR	ATTENUATION (dB)	TCA (dB/dB/°C)
ORANGE	3	NA
YELLOW	4	NA
GREEN	5	-0.005
BLUE	6	NA
VIOLET	NA	-0.007

CIRCUIT SCHEMATIC



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