

# ATTENUATOR TEMPERATURE VARIABLE



DATA SHEET

PART SERIES: CTVA0X00N0XF

SHEET 1 OF 3  
Dwg 1011045

EN 16-0736  
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

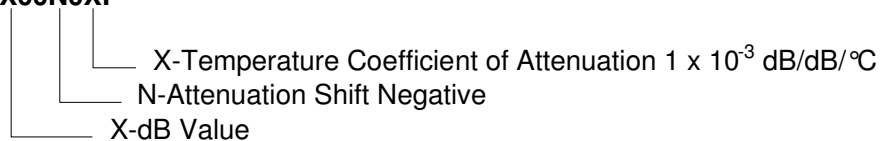


## GENERAL DESCRIPTION

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: CTVA0X00N0XF



## SPECIFICATIONS

### 1.0 ELECTRICAL

Nominal Impedance:	75 ohms
Frequency Range:	DC-2 GHz
Attenuation Values Available:	0-9 dB in 1 dB increments
Attenuation Accuracy:	@ 25°C: $\pm 0.5$ dB @ 1 GHz
VSWR:	1.10:1 @ dc-500 MHz, 1.15:1 @ 500-1000 MHz, 1.25:1 @ 1000-2000 MHz
Input Power	2 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, -0.008 and -0.009 dB/dB/°C
Temperature Coefficient Tolerance:	$\pm 0.001$ dB/dB/°C

### 2.0 ENVIRONMENTAL

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

### 3.0 MARKING

Unit Marking: dB Value (X), [adding "R" denotes decimal point, if applicable, e.g. 1R5=1.5 dB] Direction of Shift (N) And TCA Shift (X).

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

Inspection in accordance with 824W107

Test Data Requirements:

No Data Required for Customer

Data Retention – 24 Months

## 5.0 PACKAGING

Standard:

Tape and Reel

## 6.0 MECHANICAL

Substrate Material:

Alumina, 96% MIL-I-10

Terminal Material:

Thick Film, Lead Free Plating

Workmanship

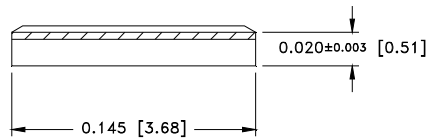
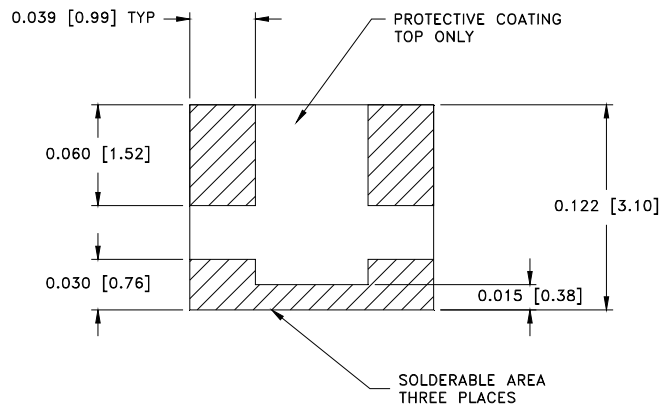
Per MIL-PRF-55342

Resistive Element:

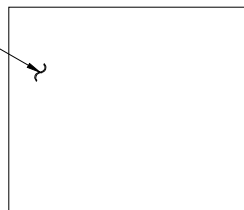
Thick Film

Metric Dimensions:

Provided for reference only



UNITS MARKED ON  
THIS SURFACE



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

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## 7.0 FOOTPRINT

Part Number	Inches						mm					
	A	B	C	D	S	W	A	B	C	D	S	W
CTVA0X00N0XF	0.043	0.065	0.065	0.025	0.040	0.150	1.09	1.65	1.65	0.64	1.02	3.81

