

ATTENUATOR TEMPERATURE VARIABLE



DATA SHEET

PART SERIES: CTVA0X00N0XW3F

SHEET 1 OF 3
Dwg 1010975

EN 16-0736
Revision A

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

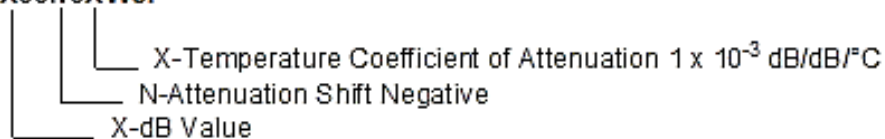


GENERAL DESCRIPTION

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: CTVA0X00N0XW3F



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: ± 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, -0.009 dB/dB/°C
Temperature Coefficient Tolerance:	± 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=1.5dB] 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.

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PART SERIES: CTVA0X00N0XW3F

SHEET 2 OF 3
Dwg 1010975

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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

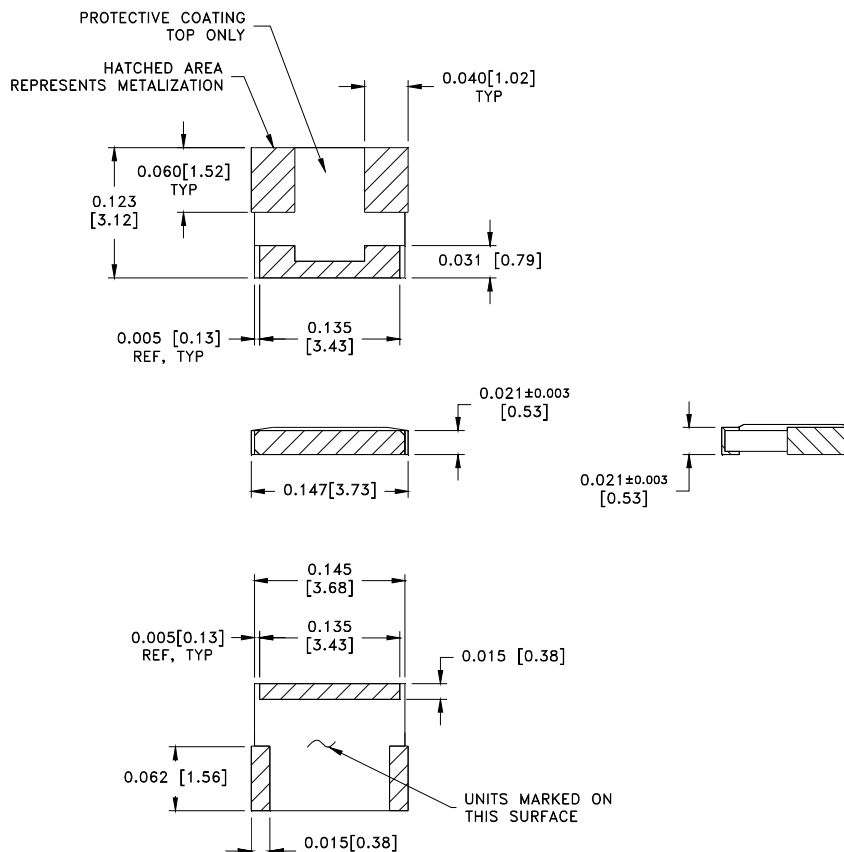
Data Retention – 24 Months

5.0 PACKAGING

Standard: Tape and Reel

6.0 MECHANICAL

Substrate Material: Alumina, 96% MIL-I-10
Terminal Material: Thick Film, Nickel Barrier, Lead Free 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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SHEET 3 OF 3
Dwg 1010975

EN 16-0736
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7.0 FOOTPRINT

Part Number	Inches						mm					
	A	B	C	D	S	W	A	B	C	D	S	W
CTVA0X00N0XW3F	0.043	0.064	0.067	0.023	0.041	0.152	1.09	1.63	1.70	0.58	1.04	3.81

