

ATTENUATOR TEMPERATURE VARIABLE



DATA SHEET

PART SERIES: CTVA0X00N0XS

SHEET 1 OF 3
Dwg 1010885

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

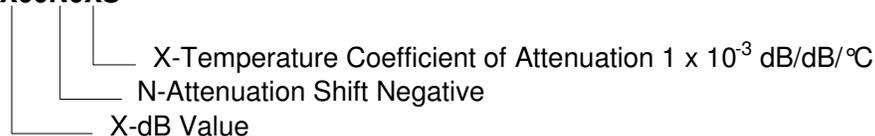


GENERAL DESCRIPTION

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: CTVA0X00N0XS



SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance: 75 ohms
Frequency Range: DC-2 GHz
Attenuation Values Available: 1-10 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 at 150°C.
Temperature Coefficient of Attenuation: -0.003, -0.004, -0.005, -0.006, -0.007, -0.008, -0.009, and -0.011 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.

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:

Tape and Reel

6.0 MECHANICAL

Substrate Material:

Alumina, 96% MIL-I-10

Terminal Material:

Thick Film, Nickel Barrier, Solder Coated

Workmanship

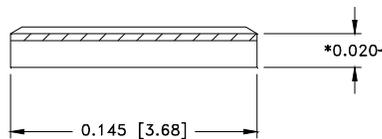
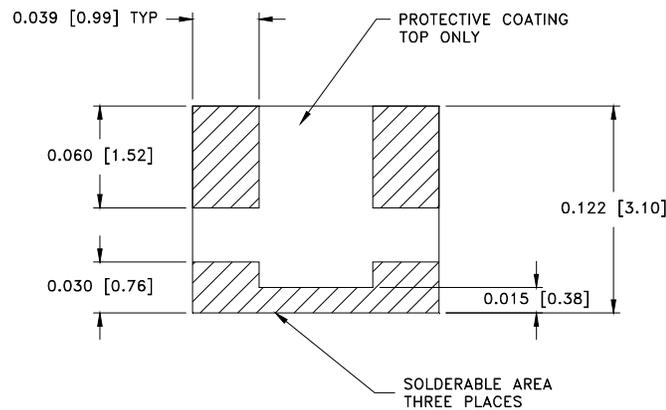
Per MIL-PRF-55342

Resistive Element:

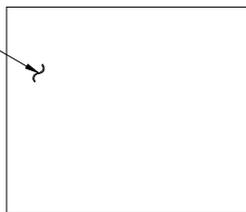
Thick Film

Metric Dimensions:

Provided for reference only



UNITS MARKED ON THIS SURFACE



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

Dimensions apply before solder allow 0.015 max for pretinned surfaces

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7.0 FOOTPRINT

Part Number	Inches						mm					
	A	B	C	D	S	W	A	B	C	D	S	W
CTVA0X00N0XS	0.043	0.065	0.064	0.025	0.040	0.150	1.09	1.65	1.65	0.64	1.02	3.81

