

ATTENUATOR TEMPERATURE VARIABLE



DATA SHEET

PART SERIES: TVAXX00XXXS

SHEET 1 OF 3
Dwg 1007785

EN 16-0736
Revision P

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

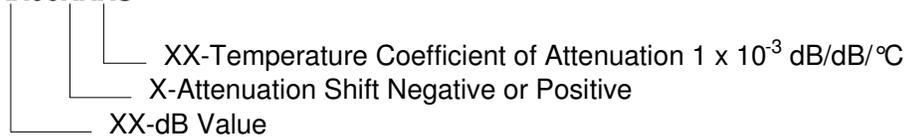


GENERAL DESCRIPTION

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: TVAXX00XXXS



SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance:	50 ohms
Frequency Range:	DC-6 GHz
Attenuation Values Available:	1-10 dB in 1 dB increments
Attenuation Accuracy:	@ 25°C: ± 0.5 dB @ 1 GHz
VSWR:	1.30:1 Max @ 1 GHz
Input Power	Negative Shifting: 2 watts cw. Positive Shifting: 0.25 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, and -0.009 dB/dB/°C 0.003, 0.005, 0.006, and 0.007 dB/dB/°C
Temperature Coefficient Tolerance:	± 0.001 dB/dB/°C

2.0 ENVIRONMENTAL

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

Unit Marking:	dB value (X), direction of shift (N or P) and TCA shift (X).
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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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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, Solder Coated

Workmanship

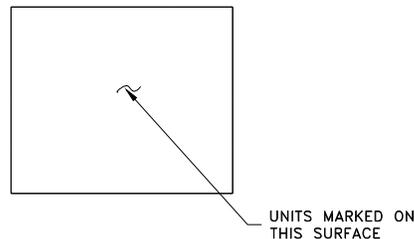
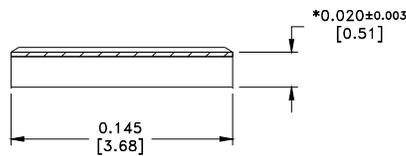
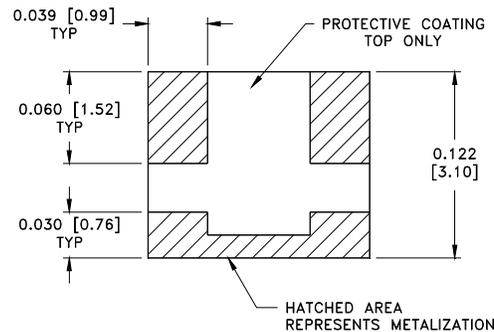
Per MIL-PRF-55342

Resistive Element:

Thick Film

Metric Dimensions:

Provided for reference only



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
TVAXX00XXXS	0.043	0.065	0.065	0.025	0.040	0.150	1.09	1.65	1.65	0.64	1.02	3.81

