ATTENUATOR
TEMPERATURE VARIABLE

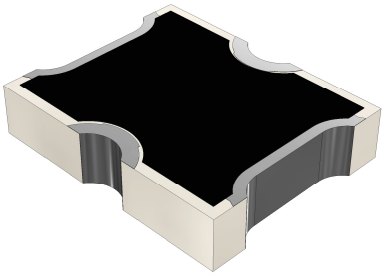
smiths interconnect
bringing technology to life

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

Smiths Interconnect 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: WTVAXX00N0XSMTF

- X-Temperature Coefficient of Attenuation 1 x 10^{-3} dB/dB/°C
- N-Attenuation Shift Negative
- XX-dB Value

SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance:	50 ohms
Frequency Range:	DC TO 20 GHz
Power Rating:	200 Milliwatts full rated power to 125°C, derated linearly to 0 watts at 150°C.
Attenuation Values Available:	2, 3, 4, 5, 6, 7 and 10dB
Attenuation Accuracy @ 25ºC	± 0.5 dB @ 15 GHz
	± 1.0 dB @ 20 GHz
VSWR @ 25ºC:	1.40:1 Typical DC-20 GHz
	1.70:1 Maximum DC-20 GHz
Peak Power	2 Watts for 10µs pulse width @ 1% duty cycle
Temperature Coefficient of Attenuation:	-0.003, -0.005, and -0.007 dB/dB/ºC
Temperature Coefficient Tolerance:	± 0.001 dB/dB/ºC

2.0 ENVIRONMENTAL

Operating Temperature:	-55˚C to +150˚C
Non-operating Temperature:	-65˚C to +150˚C

3.0 MARKING

Unit Marking:	None

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 20ºC 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:

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

Inspection in accordance with 824W107

Test Data Requirements:

No Data Required for Customer

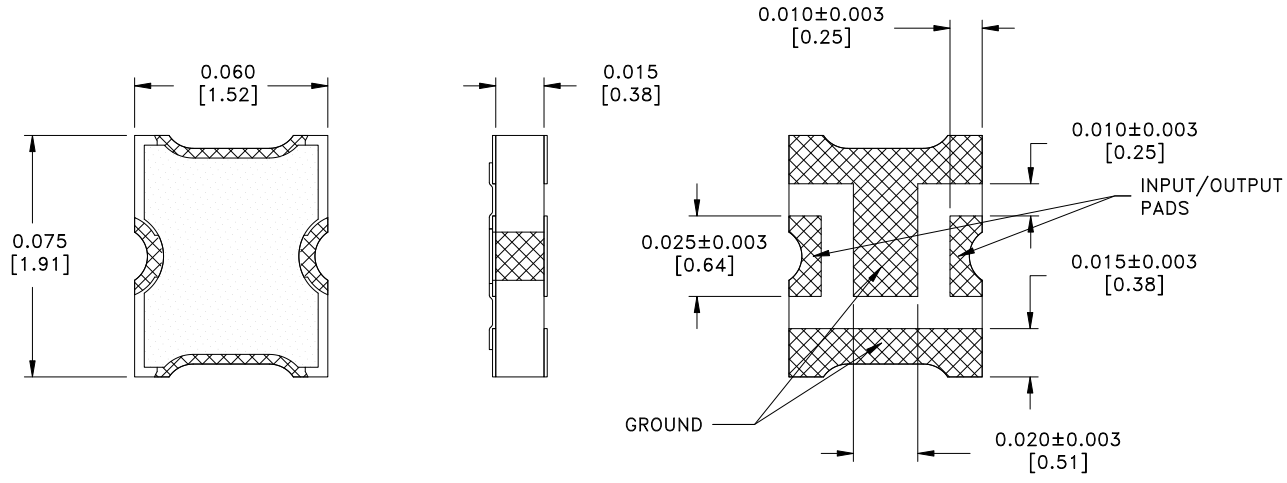
Data Retention – 24 Months

5.0 PACKAGING

Standard:	Tape and Reel

6.0 MECHANICAL

Substrate Material:	Alumina
Terminal Material:	Thick Film, Lead Free Plating
Workmanship	PER MIL-PRF-55342
Ground Plane:	Thick Film
Resistive Element:	Thick Film
Metric Dimensions:	Provided for reference only



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

7.0 SUGGESTED MOUNTING FOOTPRINT

	Inches						mm					
Part Number	A	B	C	D	E	W	A	B	C	D	E	W
WTVAXX00N0XSMTF	0.025	0.015	0.016	0.049	0.018	0.070	0.64	0.38	0.41	1.24	0.46	1.78