ATTENUATOR
WIDEBAND TEMP VARIABLE

smiths interconnect
bringing technology to life

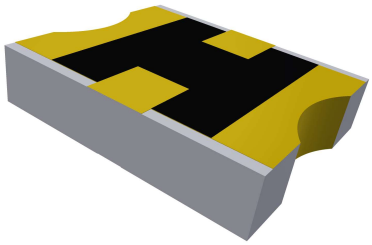
DATA SHEET **PART SERIES: WTVA0X00N0XWB2**

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: WTVA0X00N0XWB2

- TEMPERATURE COEFFICIENT OF ATTENUATION 1 X 10^{-3} DB/DB/°C.
- ATTENUATION SHIFT NEGATIVE OR POSITIVE.
- DB VALUE SEE TABLE BELOW.

SPECIFICATIONS

1.0 ELECTRICAL

Nominal Impedance: 50 ohms

Frequency Range: DC - 20GHz

Attenuation Values Available:

SHIFT (NEG)	DB VALUE
-.009	2,3,4,5,6,7
-.007	2, 3, 4, 5, 6
-.006	2, 3, 4, 5, 6, 7
-.005	2, 3, 4, 5, 6,7
-.004	2, 3, 4, 5, 6,7
-.003	2, 3, 4, 5, 6
.004	2

Attenuation Accuracy: @ 25ºC: ± 0.5 dB @ 1GHz

VSWR: DC – 10GHz 1.25:1 MAX 10-20GHz 1.7:1 MAX AT 25°C.

Input Power 0.2 Watts CW.

Temperature Coefficient of Attenuation: -0.003, -0.004, -0.005, -0.006, -0.007 dB/dB/ºC

Temperature Coefficient Tolerance: ± 0.001 dB/dB/ºC

2.0 ENVIRONMENTAL

Operating Temperature: -55˚C to +125˚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

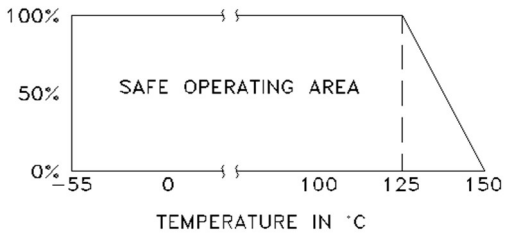
Data Retention – 24 Months

5.0 PACKAGING

Standard:	Tape and Reel

6.0 MECHANICAL

Substrate Material:	Alumina 96%, MIL-I- 10.
Terminal Material:	Thick Film, Bondable Gold
Workmanship	PER MIL-PRF-55342
Ground Plane:	Thick film, solderable.
Resistive Element:	Thick film
Metric Dimensions:	Provided for reference only



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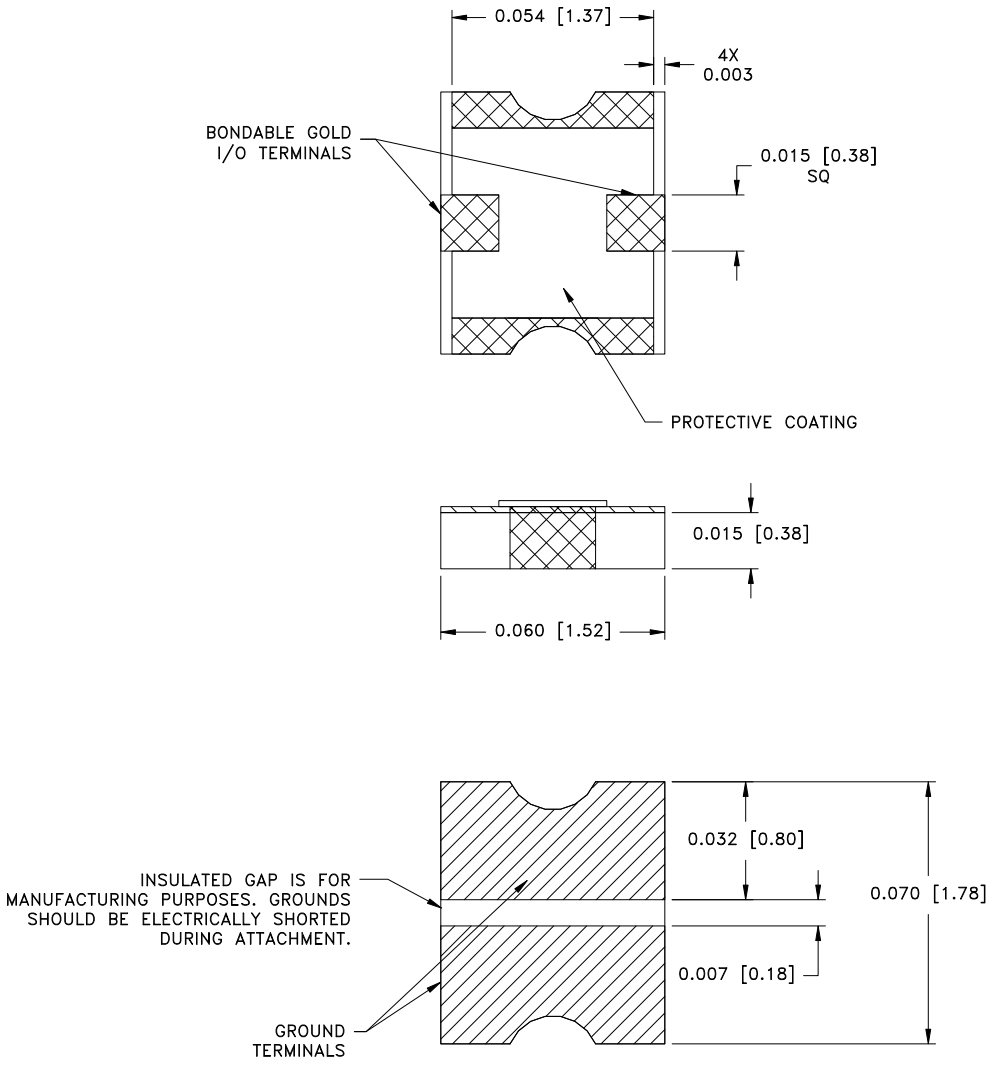

Unless Otherwise Specified: TOLERANCE: X.XXX = ± 0.005