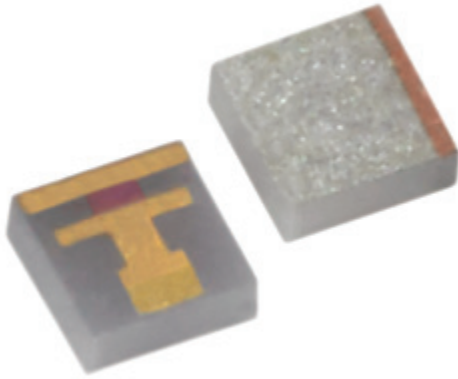


# High Frequency Wire Bondable Chip Terminations

ALUMINUM NITRIDE, WIRE-BONDABLE, CHIP TERMINATION, DC-64 GHz



Smiths Interconnect's new chip terminations offer a unique combination of high frequency and high power in a small package.

The CTX high frequency termination series offers an unrivalled power rating capability up to 5 Watts, while reducing size and weight. The new CTX Series is designed to offer excellent broadband performance up to 64GHz. It allows wider coverage than traditional components while ensuring optimized return loss for multiple band ranges and applications. This allows the customer to use a single chip in multiple applications reducing the cost of ownership.

The market trends of Space and Defense communications systems require higher frequency chip termination products specifically tuned to operate from L through V band frequency ranges where the power levels vary depending on the band of interest and whether the product functions on the transmit or receive part of the system.

By providing a broader frequency range up to 64 GHz, we assure that the terminations with optimized return loss, are well suited for various bands of interest and a wide array of applications.

The CTX series of chip terminations pushes both the limits of frequency and power in a small easy to implement wire-bondable package.

## Features and Benefits

- Power rating up to 5 Watts, increased by up to 5x over alternative solutions
- Frequency rating DC to 64 GHz with optimal broad band performance
- Excellent VSWR (1.25:1 Typical)
- Total Thin Film Construction
- Reduced footprint (up to 75% smaller) allowing for space and weight savings on the board: 0.040" x 0.040" x 0.015"
- High volume production capability supporting customers' quick ramp up program needs

## Applications

- Amplifier Circuits
- Isolators
- Transmit/Receive Modules
- Up/Down Converters
- Instrumentation
- Satellite Communications
- Radar
- Broadcast

# Technical Characteristics

Mounting Configuration Options	CT0404ALN1WB1	CT0404ALN2WB1
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## Electrical

Nominal Impedance	50 ohms ± 10%	
Frequency Range	DC-42.5 GHz	DC-64 GHz
Input Power CW	5 Watts	1 Watt
Peak Power	10X CW power based on 1 μS pulse width @ 1% Duty Cycle	
VSWR	1.25:1 Typical Note: When properly matched in a 50 ohm system using Smiths Interconnect Suggested Mounting Guidelines.	

## Environmental

Operating Temperature	-55°C to +150°C
Storage Temperature	-65°C to +150°C
Temperature Coefficient	± 200 PPM/°C Max
Moisture Sensitivity Level	MSL 1 - Unlimited

## Mechanical

Substrate Material	Aluminum Nitride
Resistive Film	Thin Film, Tantalum Nitride
Terminal Material	Thin Film, Gold over Nickel
Ground Plane	Thin Film, Solderable Silver over Platinum
Protective Coating	Silicon Nitride

## Marking

Unit Marking	None
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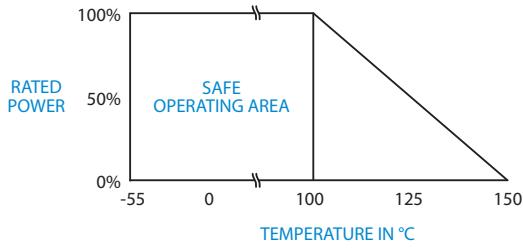
## Quality Assurance

	<p>Sample visual and mechanical inspection - 1.0 AQL per mechanical drawing requirements.</p> <p>Periodic electrical inspection performed for commercial grade products.</p> <p>High reliability tested products are available per MIL-PRF-55342.</p>
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## Packaging

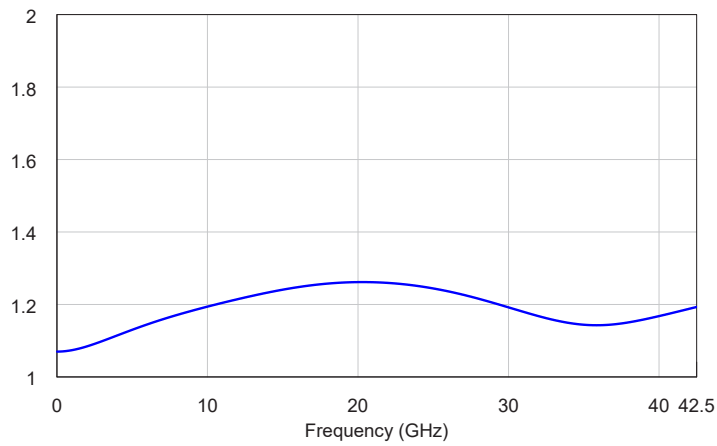
Standard Packaging	Tape and Reel or Waffle Pack
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# Power Derating Curve

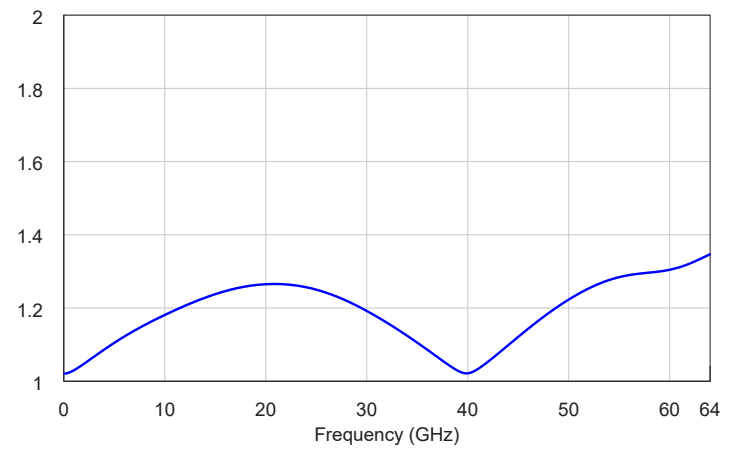


# Typical Data

CT0404ALN1WB1 Series VSWR

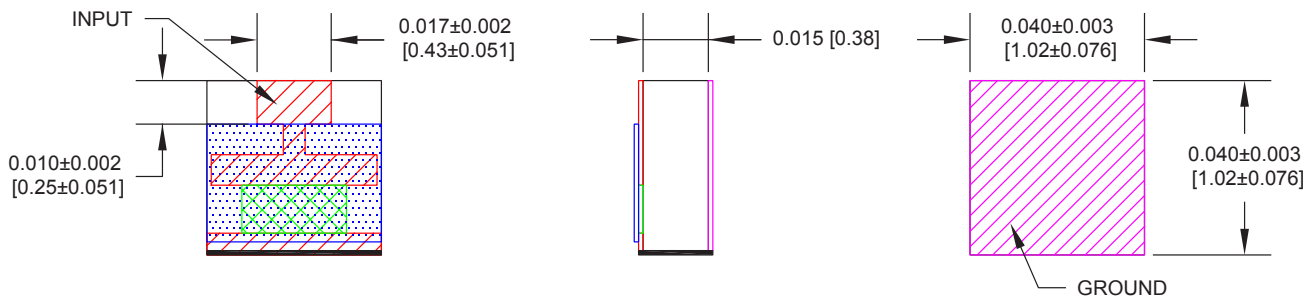


CT0404ALN2WB2 Series VSWR



# Mechanical

CT0404ALNXWB1 - Wire Bondable



Unless otherwise specified, tolerance: X.XXX = ±0.01" X.XXX = ±0.001"

# How To Order

Specify Model Number: **CT0404ALNXWB1**

<span>C T 0 4 0 4 A L N</span>		<span> </span>	<span>W B 1</span>	
<b>1</b>		<b>2</b>	<b>3</b>	
<b>1 Series Name</b>	<span>C T 0 4 0 4 A L N</span> Series			
<b>2 Frequency</b>	<span>1</span> 1 - DC-42.5 GHz	<span>2</span> 2 - DC-64.0 GHz		
<b>3 Options</b>	<span>W B 1</span> Wire Bondable			

# Global Support

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