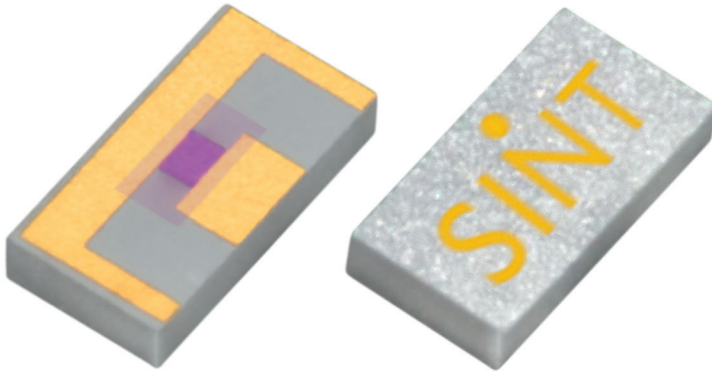


High Frequency Surface Mountable Chip Terminations

SMT CHIP TERMINATION, DC-67 GHZ



Smiths Interconnect's High Frequency SMT Chip Terminations series is designed to offer excellent broadband performance up to 67GHz, providing optimized return loss across the frequency band.

The patented layout provides substantial power handling in a small lightweight package, up to 1 Watt CW of input power, thanks to the added thermal paths this product provides.

Several qualification tests have been completed to ensure long term reliability in critical applications, including thermal shock, burn, RF over temperature, low temperature operation, high temperature exposure, peak power, and solder mount integrity. The results have confirmed that CTX SMT design and RF performance are ideal to support RF and microwave applications in Defence, Space, Aerospace and 5G broadband demanding market segments.

The CTX SMT series of chip terminations offer a unique combination of high power and high frequency in a small package

Features and Benefits

- Frequency rating DC to 67 GHz with optimized return loss
- VSWR performance 1.25:1 Typical (1.50:1 Maximum)
- Power rating up to 1 Watts CW in a small 0603 package
- Qualification testing per MIL-PRF-55342
- Total thin film technology offering tighter mechanical tolerances for better control of the RF performance.
- Environmentally-friendly materials compliant to RoHS standards
- 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

Technical Characteristics

Mounting Configuration Options	CTH0603ALN1SMTF
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Electrical

Nominal Impedance	50 ohms ± 10%
Frequency Range	DC-67 GHz
Input Power CW	1 Watt
Peak Power	10X CW power based on 1 µS pulse width @ 1% Duty Cycle
VSWR	1.25:1 Typical; 1.50:1 Max 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 Bars	Thin Film, Gold over Nickel
Protective Coating	Silicon Nitride

Marking

Unit Marking	SINT & Orientation Dot
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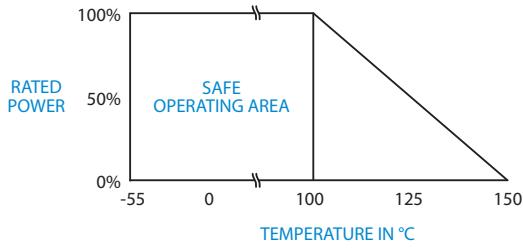
Quality Assurance

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

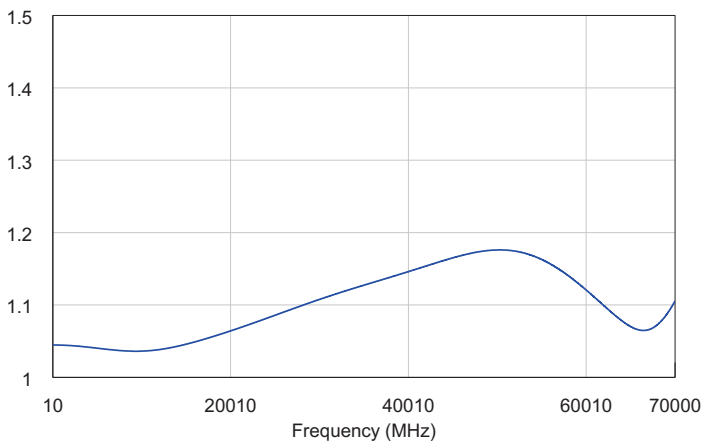
Standard Packaging	Tape and Reel or Waffle Pack
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Power Derating Curve



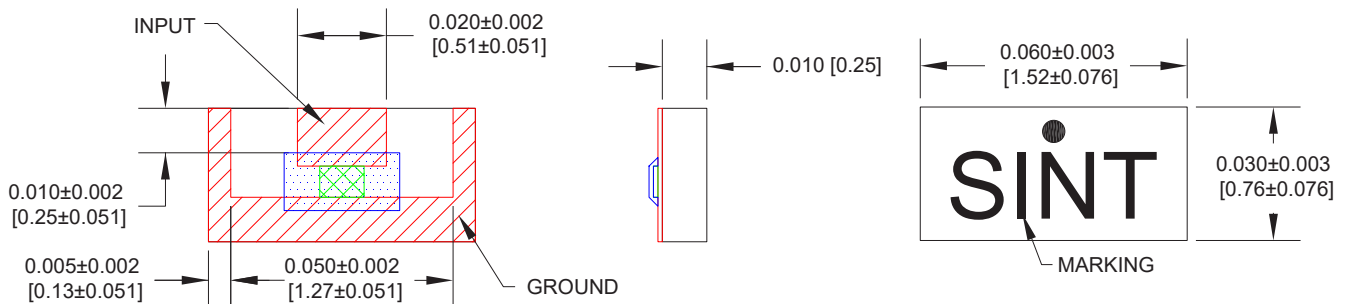
Typical Data

CTH0603ALN1SMTF Series VSWR



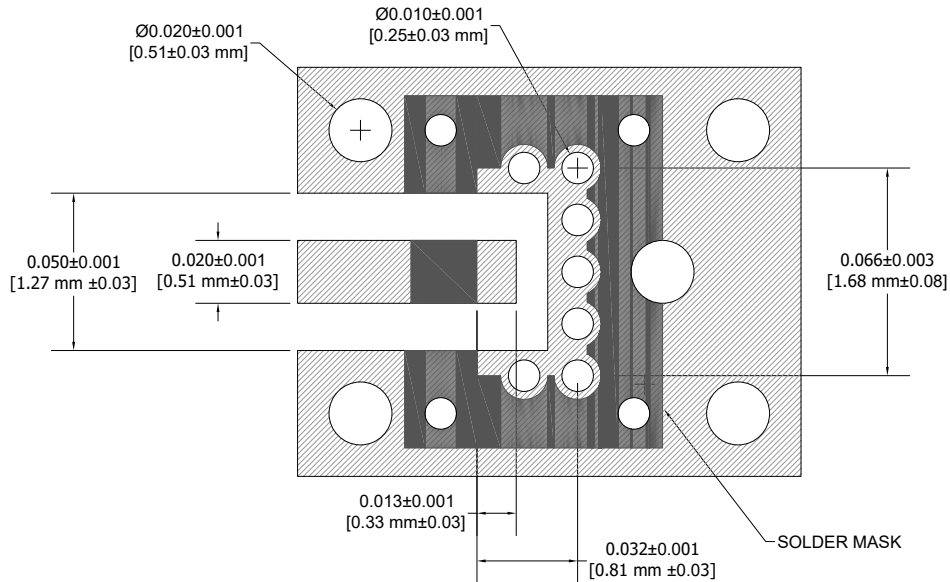
Mechanical

CTH0603ALN1SMTF - Surface Mountable



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

Suggested Mounting Footprint



DESIGN BASED ON MICROSTRIP,
ROGERS 6035HTC, 0.010" SUBSTRATE

How To Order

Specify Model Number: **CTH 0603 ALN 1 SMT F**

	C T H	0 6 0 3	A L N	1	S M T	F
	1	2	3	4	5	6
1 Model Name	C T H Chip Termination					
2 Dimensions		0 6 0 3 Length and Width (0.06" X .030")				
3 Substrate			A L N Aluminum Nitride			
4 Frequency				1 1 - DC-67 GHz		
5 Options					S M T Surface Mount	
6 Terminal Finish						F RoHS Compliant

Global Support

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