

Surface Mount Termination
100 Watts, 50Ω

Description:

The C100N50Z4B is a high performance Aluminum Nitride (AlN) surface mount termination with a peak to average power rating of 12 dB. This termination is intended as a cost competitive alternative to Beryllium Oxide (BeO), and is designed particularly for LTE and 5G wireless communication frequency bands. The high power handling makes the part ideal for terminating high power 90 degree couplers and for use in microstrip circuits. The termination is also RoHS compliant!

Features:

- DC -5 GHz
- Power 100W (avg)
- Peak-average 12dB
- Low VSWR
- RoHS Compliant
- 100% Tested
- AlN Ceramic
- Small Size
- LTE & 5G

General Specifications:

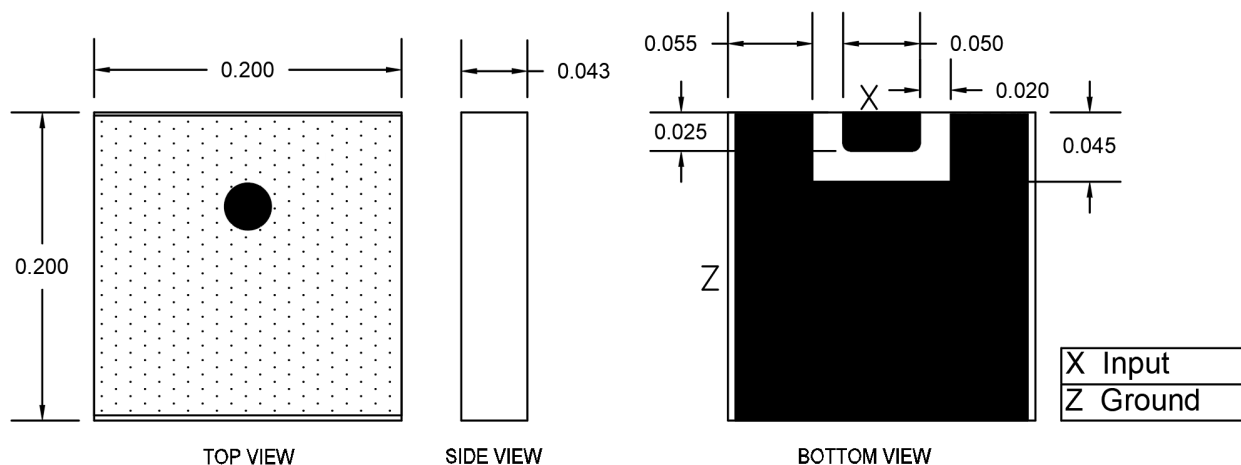
Resistive Element	Thick film
Substrate	AlN Ceramic
Terminal Finish	Matte Tin over Nickel Barrier
Operating Temperature	-55 to +150°C (see de-rating chart)

Electrical Specifications:

Power:	100 Watts (Avg Watts @ 100°C)
Max Frequency:	DC - 5 GHz
Return Loss:	>20 dB DC - 5.0 GHz

Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. Specifications subject to change.

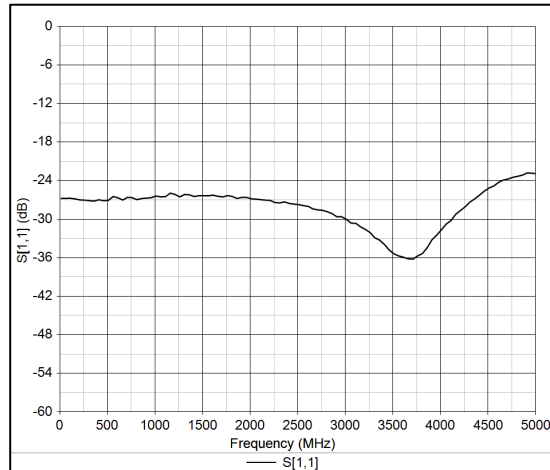
Mechanical Outline:



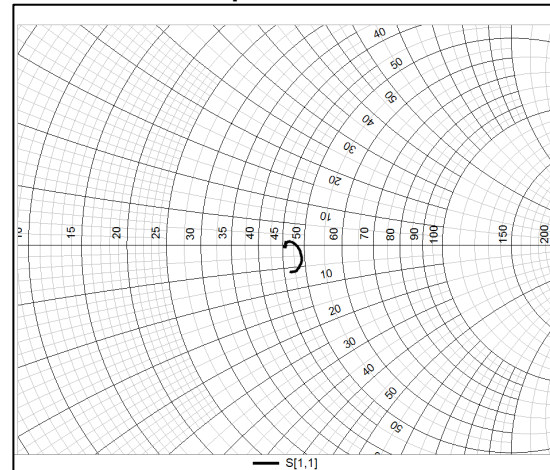
Tolerance is ± 0.005 ", unless otherwise specified. All dimensions in inches.

Typical Performance:

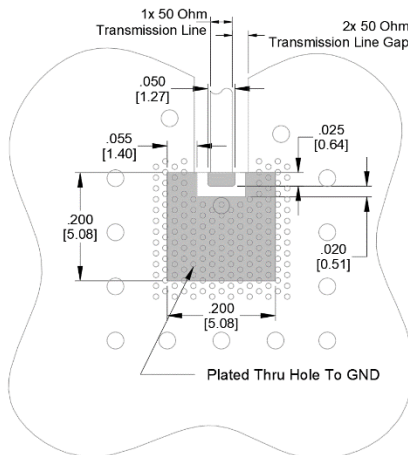
Return loss:



Impedance:



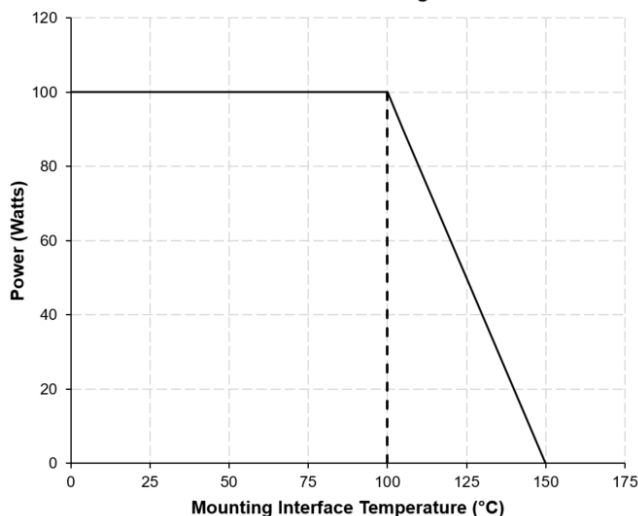
Mounting Footprint:



1. The component has been designed and qualified with this mounting footprint with a 0.020" test board with Dk value of approximately 3.5 comprised of commonly used board substrate materials such as RO4350 and Isola I-tera MT40. Deviations from the recommended mounting footprint may reduce RF and power handling performance. It is the customer's responsibility to qualify the component in the end application.
2. 1x 50 ohm transmission line is for reference only and can be oriented in any direction. Customer to determine transmission line and gap dimensions to achieve 50 ohm impedance for end application.
3. To ensure proper electrical and thermal performance there must be a ground plane with 100% solder connection underneath the part orientated as shown with part marking facing up.
4. PTH connecting pads to ground are representative.
5. Ground vias under part should be filled to prevent solder wicking.
6. Solder mask and solder stencil dimensions may vary due to different manufacturer capabilities and process variations. Layers may be modified to account for manufacturer capabilities.
7. Dimensions are in inches [millimeters].

Power Derating:

C100N50Z4B Power Derating Curve



Packaging and Ordering Information:

Parts are available in reel and are packaged per EIA 481. Parts are oriented in tape and reel as shown below.

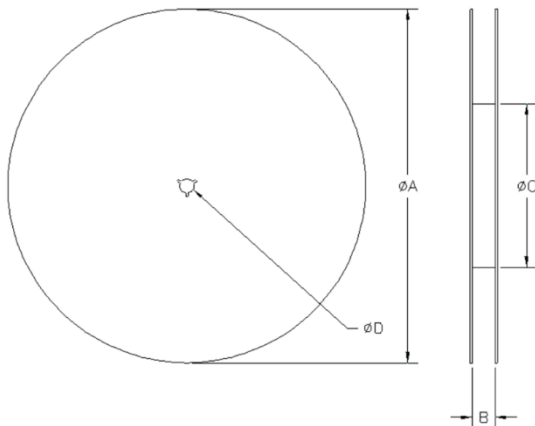
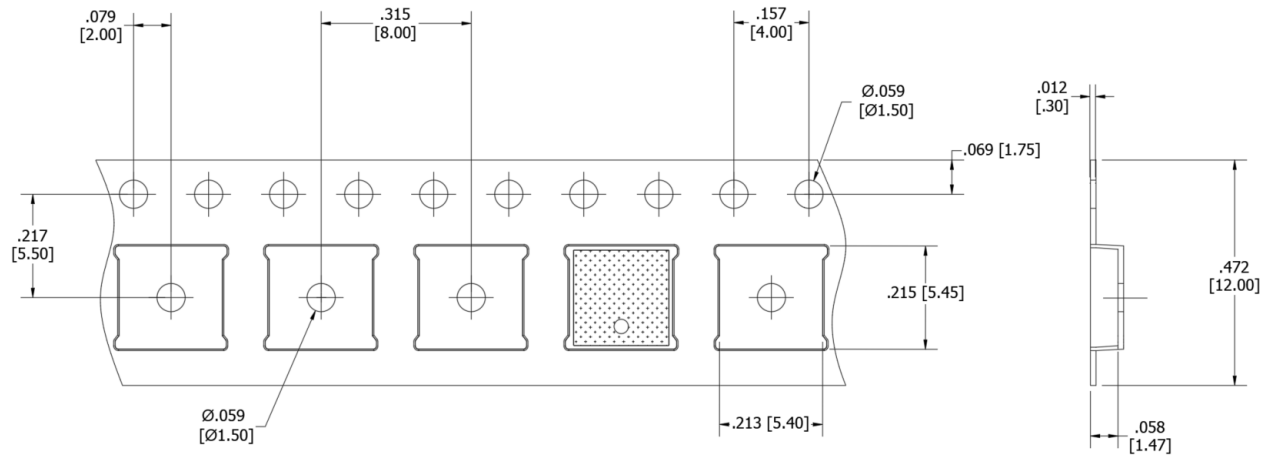


TABLE 1
REEL DIMENSIONS (mm)

ØA	7.0 [177.80]
B	0.472 [12.0]
ØC	2.00 [50.8]
ØD	0.512 [13.0]

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