



Surface Mount RF Termination  
20 Watts, 50Ω

**Description:**

The C20N50Z4B is a 20 Watt (AVG) Aluminum Nitride (AlN) surface mount termination, with a peak to average performance of 12 dB. The termination is designed for all applications in telecom and mil-aero from DC - 6 GHz including but not limited to, LTE and 5G frequency bands. The high power handling makes the part ideal for terminating high power 90 degree Xinger couplers and for use in microstrip circuits. The termination is also RoHS compliant!

**Features:**

- DC – 6.0 GHz
- LTE & 5G Bands
- Power 20 W (AVG)
- Small 1210 package
- Peak to AVG 12 dB
- Low VSWR
- 100% Tested
- RoHS Compliant
- Non-Nichrome Resistive Element
- AlN Ceramic

**General Specifications:**

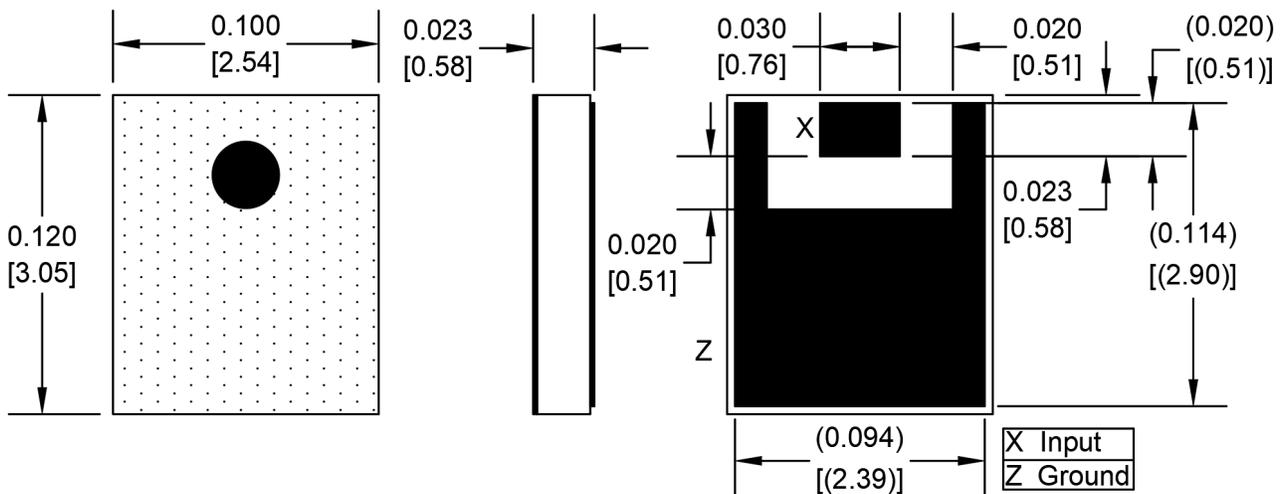
Resistive Element	Thick film
Substrate	AlN Ceramic
Terminal Finish	Matte Tin over Nickel Barrier
Operating Temperature	-50 to +150 °C (see de-rating chart)

**Electrical Specifications:**

Power:	20 Watts (Avg Watts @ 100 °C)
Max Frequency:	DC – 6.0 GHz
Return Loss:	>20 dB

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

**Mechanical Outline:**



TOP VIEW

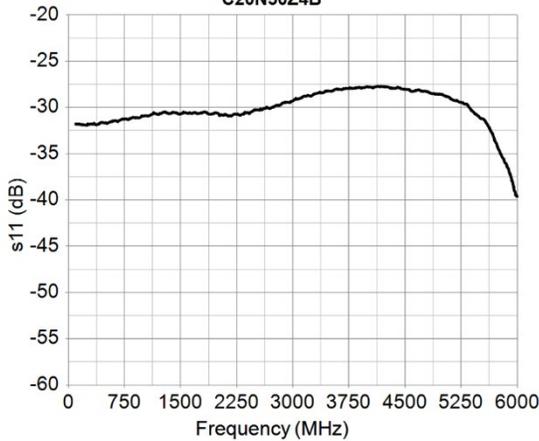
SIDE VIEW

BOTTOM VIEW

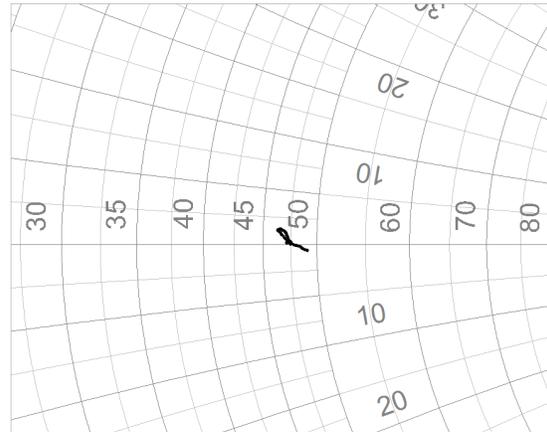
Tolerance is ±0.005", unless otherwise specified. All dimensions in inches [mm].

**Typical Performance:**

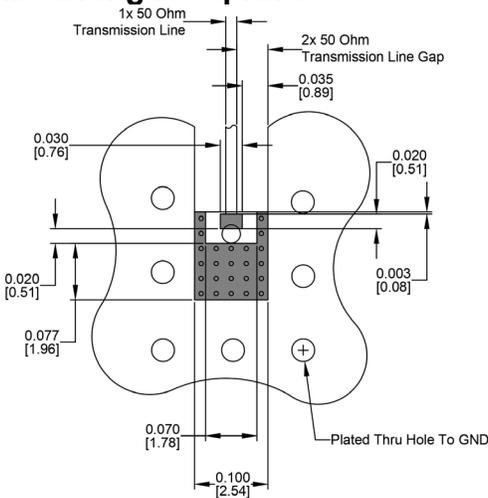
**Return loss:**  
C20N50Z4B



**Impedance:**  
C20N50Z4B



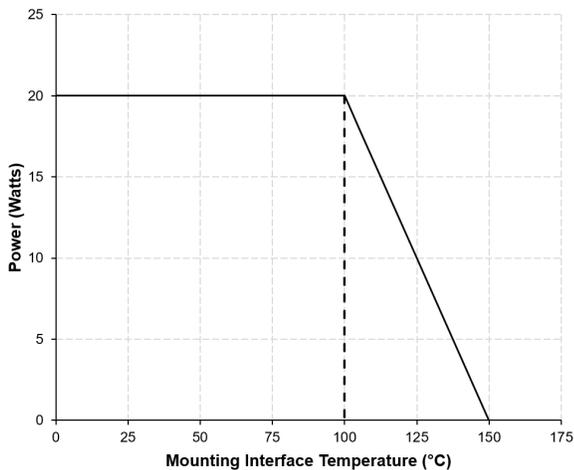
**Mounting Footprint:**



1. The component can function with either footprint above. The recommended test board is 0.020" 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].

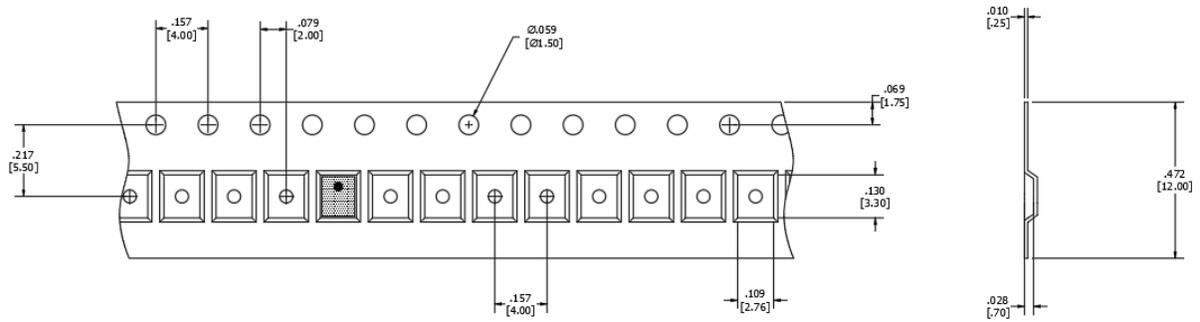
**Power Derating:**

C20N50Z4B Power Derating Curve



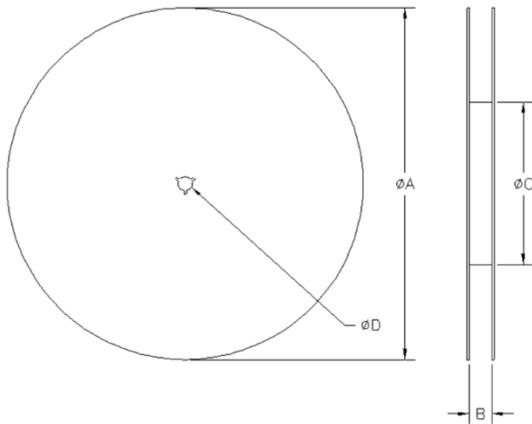
**Packaging and Ordering Information:**

Parts are available in reel. Parts are oriented in tape and reel as shown below.



Dimensions are in Inches [Millimeters]

Direction of Part Feed (Unloading) →



**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]

**Contact us:**  
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