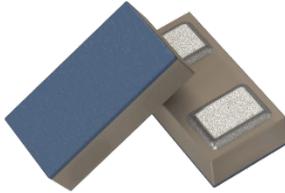


**Surface Mount RF Termination**  
**0.5 Watts, 50Ω**



**Description:**

The XRT05N50Z4 is a high performance 0402 (1mm x 0.5mm), 0.5-Watt (AVG) Aluminum Nitride (AlN) surface mount true 50 Ohm termination. The termination is designed for all Mil-Aero, Industrial and Test and Measurement applications from DC-6GHz, requiring ultra-small form factors. The power handling vs small size makes the part ideal for terminating Wilkinson power dividers, 90-degree Xinger couplers, embedded inside next generation power modules and for use in microstrip circuits. This termination is also RoHS compliant and proudly made in the USA.

**General Specifications:**

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

**Features:**

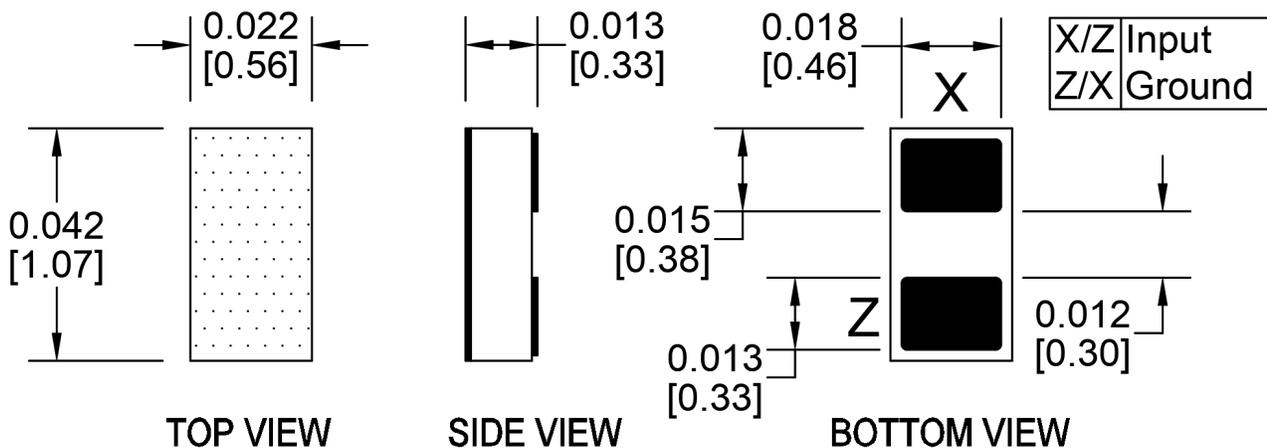
- DC – 6 GHz
- 0.5 Watts
- AlN Ceramic
- Non-Nichrome Resistive Element
- RoHS Compliant
- Low VSWR
- 100% Tested
- Made in USA

**Electrical Specifications:**

<b>Power:</b>	0.5 Watts (avg @ 100°C)
<b>Max Frequency:</b>	DC - 6.0 GHz
<b>Return Loss:</b>	>20 dB

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

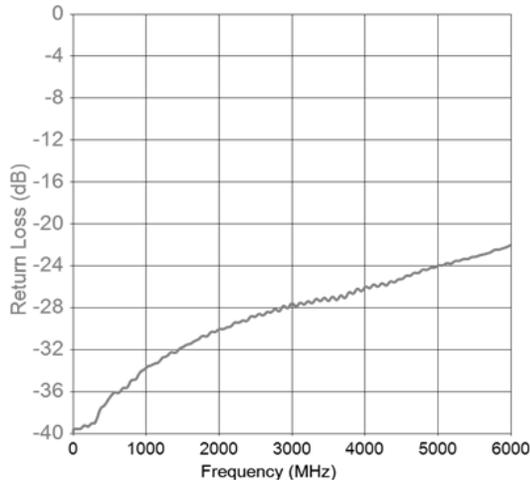
**Mechanical Outline:**



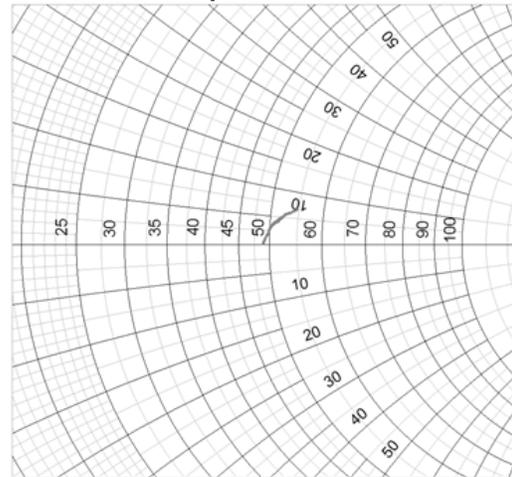
Tolerance is ±0.004", unless otherwise specified. All dimensions in inches [mm].

**Typical Performance:**

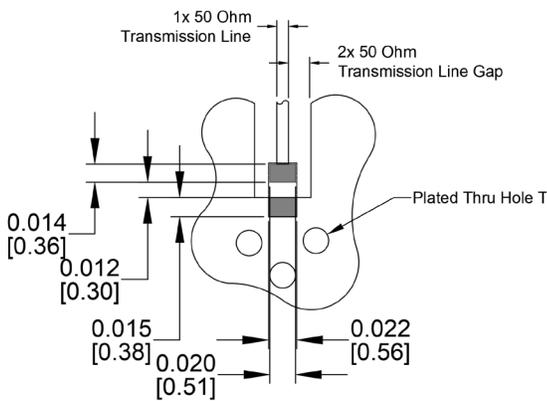
**Return loss:**



**Impedance:**



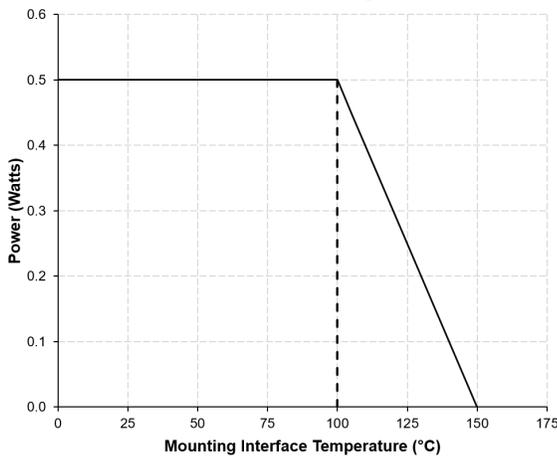
**Mounting Footprint:**



1. The component has been designed and qualified with this mounting footprint with a 0.008" 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].

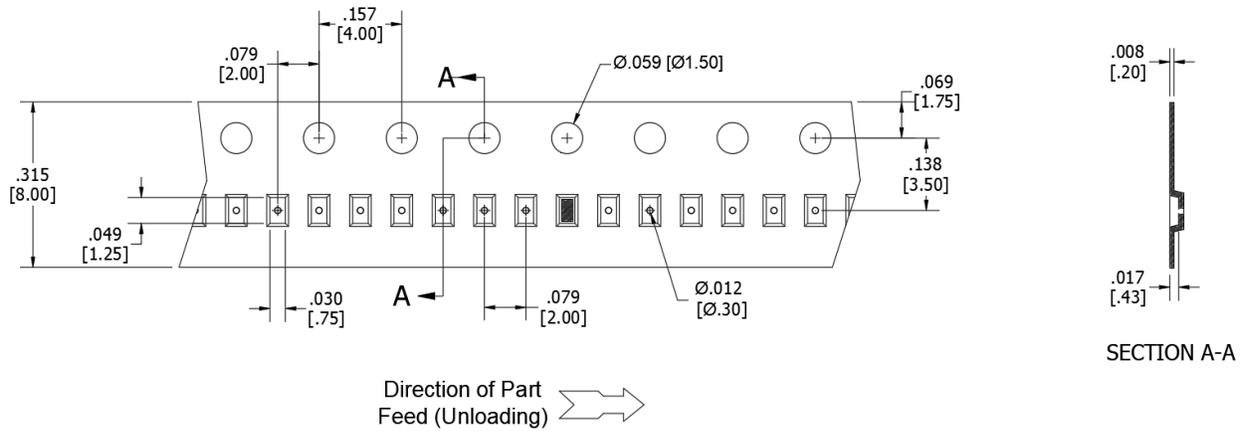
**Power Derating:**

XRT05N50Z4 Power Derating Curve

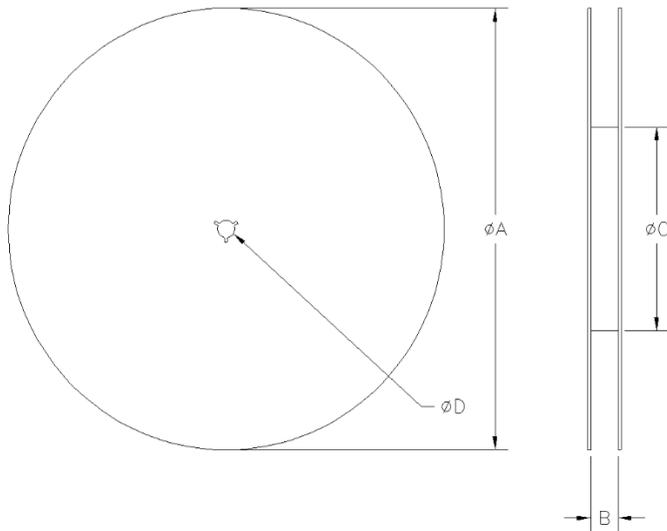


**Packaging and Ordering Information:**

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



Dimensions are in Inches [Millimeters]



**TABLE 1**  
**REEL DIMENSIONS (mm)**

DIMENSION	VALUE (mm)
ØA	177.80
B	8.00
ØC	50.80
ØD	13.00

**Contact us:**  
[rf&s\\_support@ttm.com](mailto:rf&s_support@ttm.com)