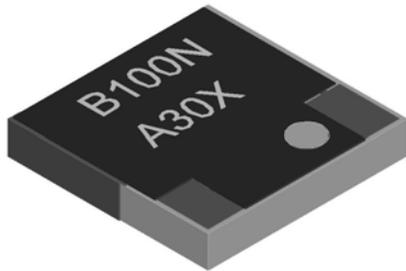


### Chip Attenuator 100 Watts, 30 dB



#### Description

The B100NA30X4 is high performance Aluminum Nitride (AlN) chip attenuator intended as a cost competitive alternative to Beryllium Oxide (BeO). The termination is well suited to all cellular frequency bands such as; AMPS, GSM, DCS, PCS, PHS and UMTS. The high power handling makes the part ideal for terminating circulators, and for use in power monitoring. The termination is also RoHS compliant!

#### 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) |

Tolerance is  $\pm 0.010$ ", unless otherwise specified. Designed to meet or exceed applicable portions of MIL-E-5400. **All dimensions in inches.**

#### Features:

- RoHS Compliant
- 100 Watts
- DC - 2.7 GHz
- AlN Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested
- Small Size

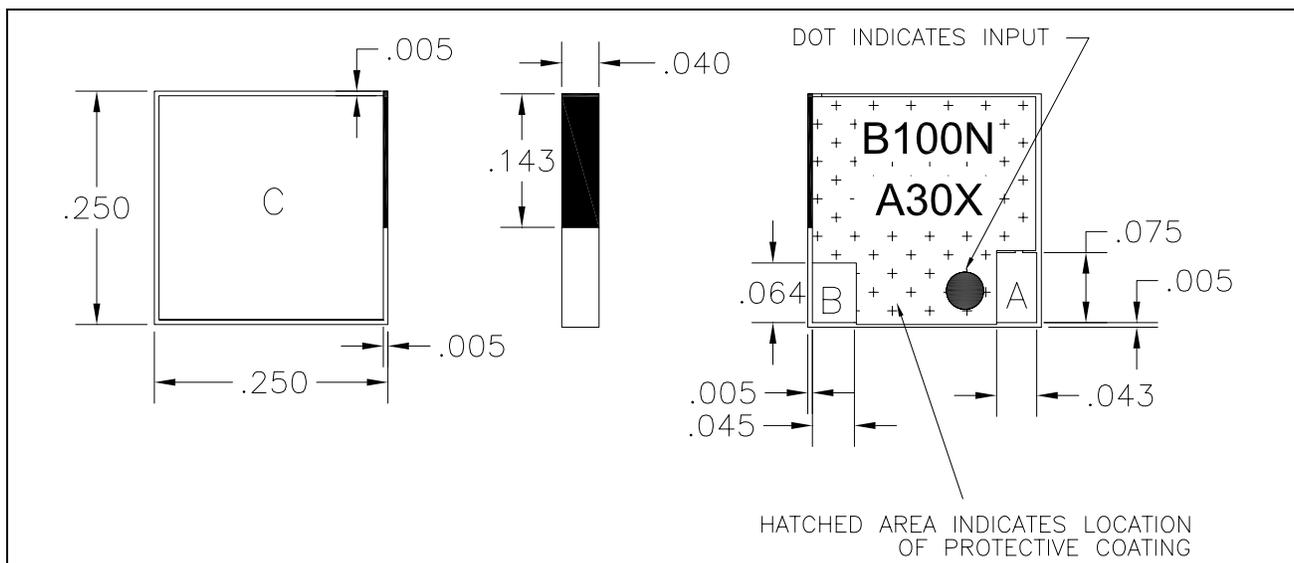
#### Electrical Specifications

|                           |   |
|---------------------------|---|
| <b>Attenuation Value:</b> | 30 dB $\pm$ 2.0 dB, DC – 1.5 GHz<br>30 dB $\pm$ 2.5 dB, 1.5GHz – 2.5GHz |
| <b>Power:</b>             | 100 Watts   |
| <b>Frequency Range:</b>   | DC – 2.7 GHz  |
| <b>Return Loss:</b>       | >24 dB to 2.2 GHz<br>>20 dB to 2.7GHz                                   |

| Value (A-B)   | Value (A-C)   | Value (B-C)   | Tolerance |
|---------------|---------------|---------------|-----------|
| 93.5 $\Omega$ | 49.9 $\Omega$ | 49.9 $\Omega$ | $\pm$ 4%  |

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

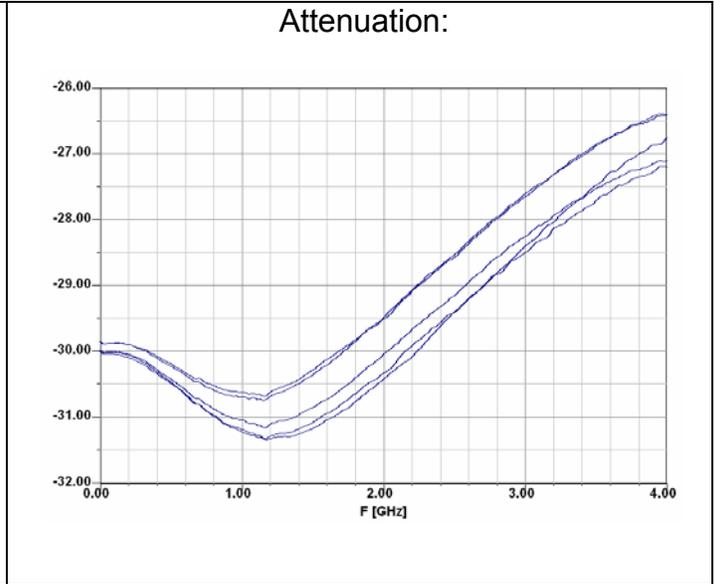
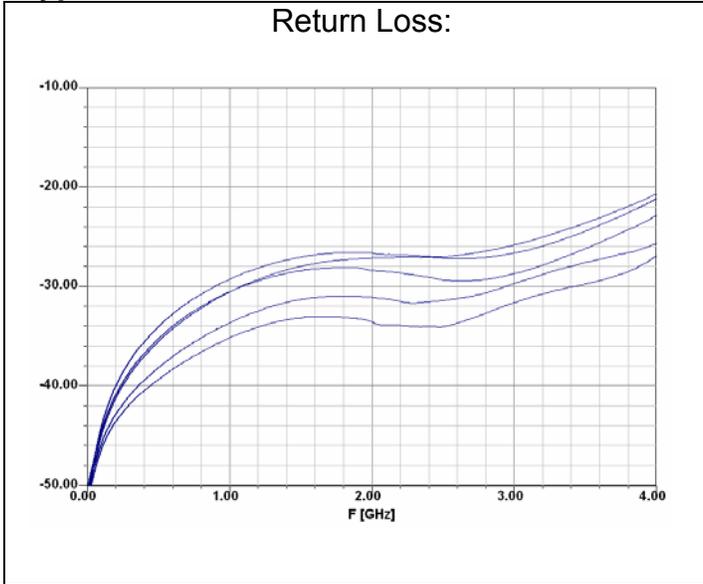
#### Outline Drawing



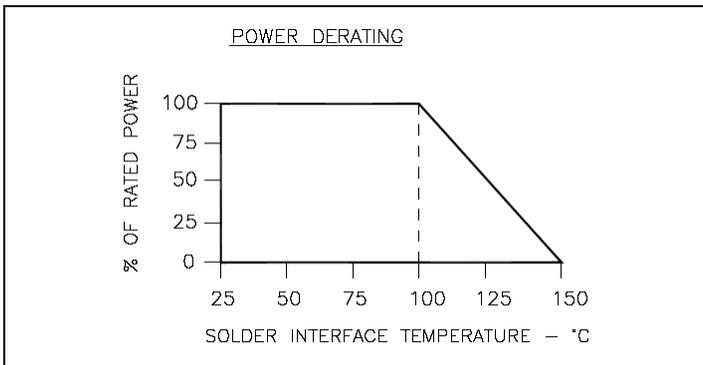
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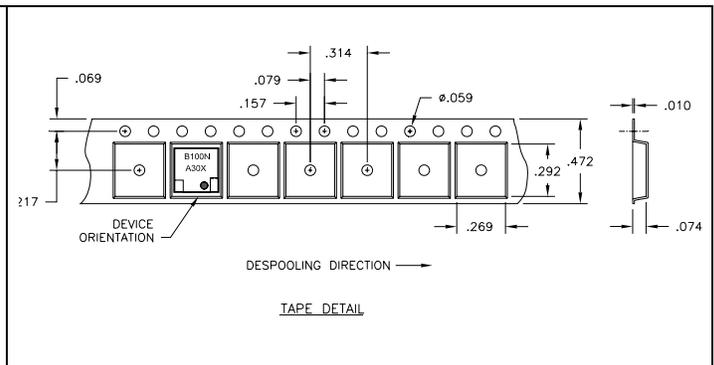
**Typical Performance:**



**Power De-rating:**



**Tape & Reel:**



**Mounting Footprint and Procedure:**

BOARD LOWER THAN LEAD. BOARD EVEN WITH LEAD.

SUGGESTED STRESS RELIEF METHODS  
SCALE: NONE

BOARD LOWER THAN LEAD. THAN LEAD.

NOT RECOMMENDED APPLICATION  
SCALE: NONE

Correct lead orientation

Alternate lead orientation.  
(May require external matching)

**SUGGESTED MOUNTING PROCEDURES:**

1. MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
2. SOLDER LEADS IN PLACE USING A HIGH TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON.
3. POSITION DEVICE ON MOUNTING SURFACE AND SOLDER IN PLACE USING SN96 SOLDER.

