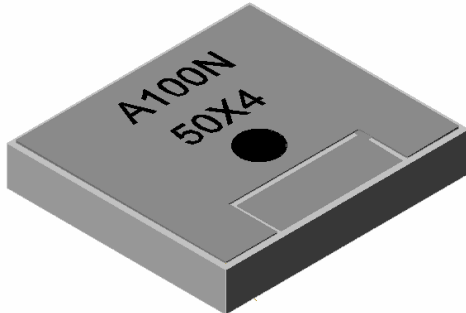


**RoHS
Compliant**

**Chip Termination
100 Watts, 50Ω**

Description

The A100N50X4 is high performance Aluminum Nitride (AlN) chip termination intended as an 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 combiners. The termination is also RoHS compliant!



Features:

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

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) |

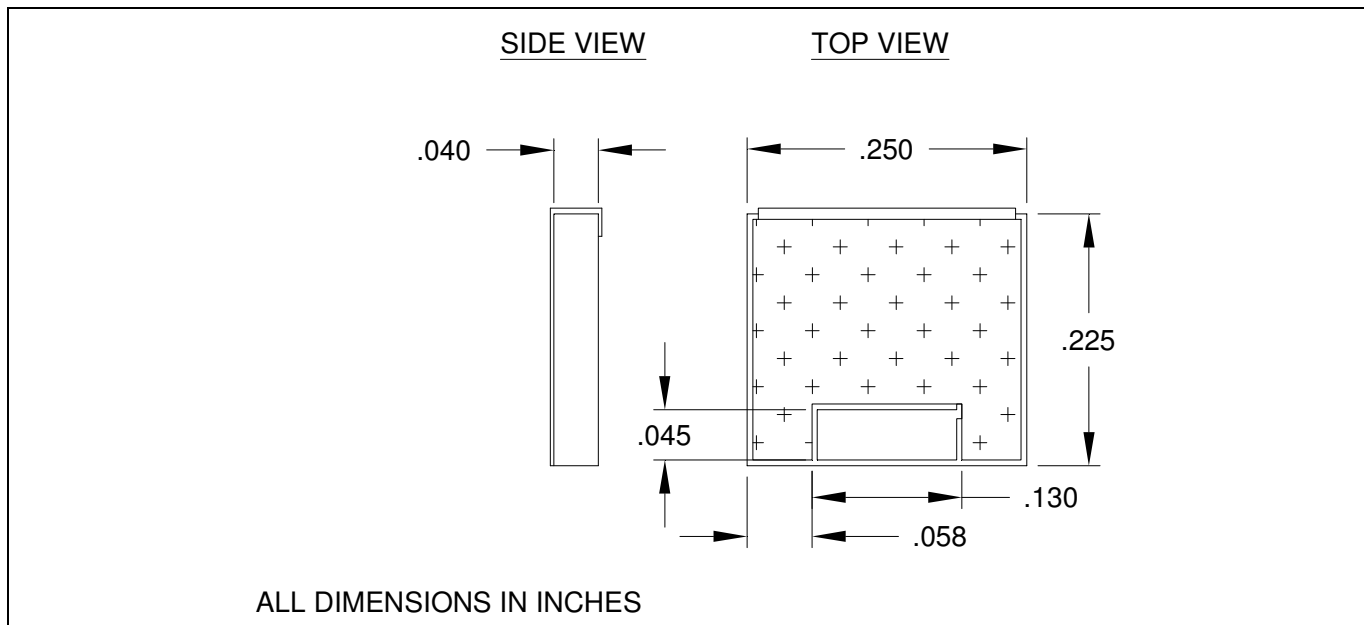
Tolerance is ± 0.010 ", unless otherwise specified. Designed to meet or exceed applicable portions of MIL-E-5400. All dimensions in inches.

Electrical Specifications

| | |
|--------------------------|--------------------|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 100 Watts |
| Frequency Range: | DC – 2.7 GHz |
| V.S.W.R. | 1.1:1 to 2.7 GHz |

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

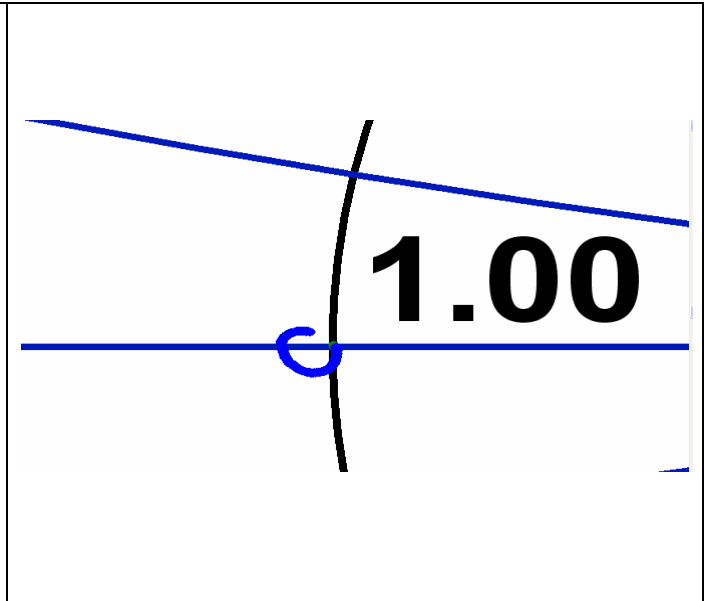
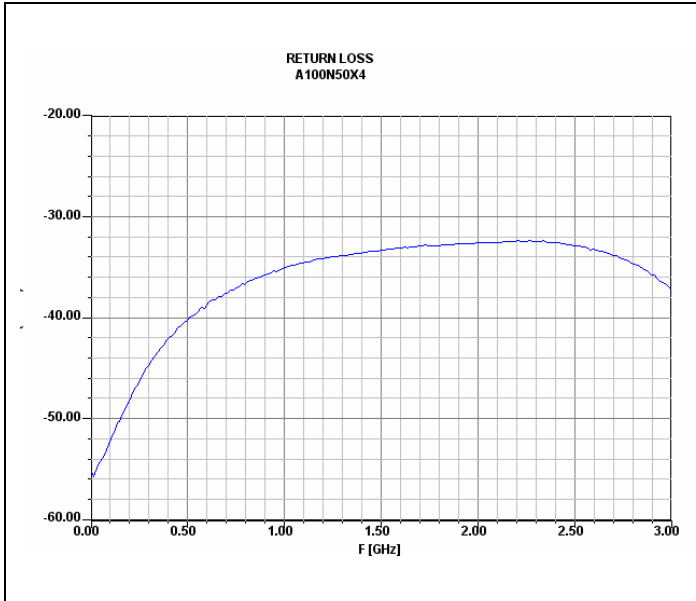
Outline Drawing



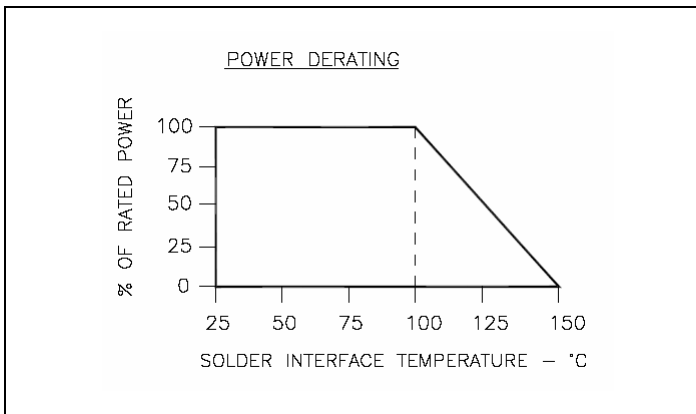
A100N50X4 (097) Rev B



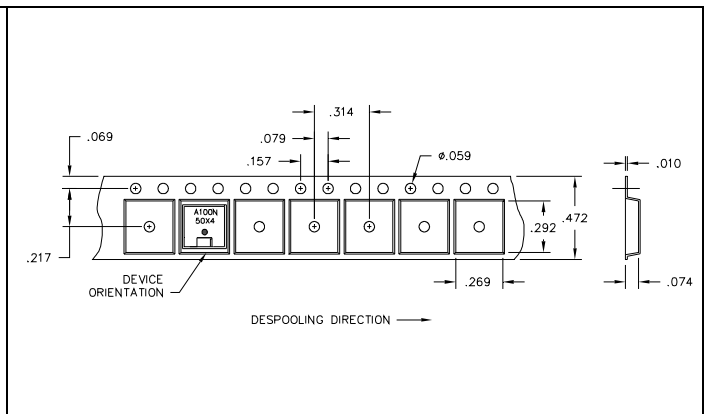
Typical Performance:



Power De-rating:



Tape & Reel:



Mounting Footprint and Procedure:

SUGGESTED STRESS RELIEF METHODS
SCALE: NONE

NOT RECOMMENDED APPLICATION
SCALE: NONE

SUGGESTED MOUNTING PROCEDURES:

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

A100N50X4 (097) Rev B

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Europe: +44 2392-232392

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**ROHS
Compliant**

**Chip Termination
125 Watts, 50Ω**

Description



The A125N50X4 is high performance Aluminum Nitride (AlN) chip termination intended as an 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 combiners. The termination is also RoHS compliant!

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) |

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

Features:

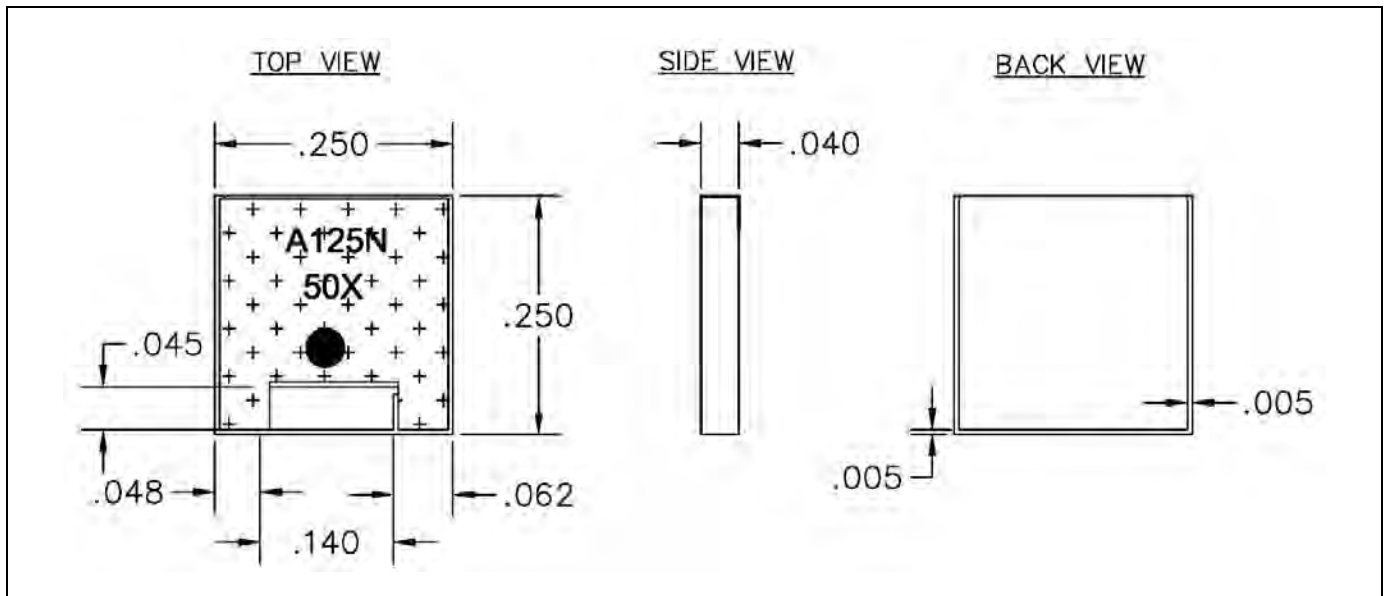
- RoHS Compliant
- 125 Watts
- DC – 4.0 GHz
- AlN Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested
- Small Size

Electrical Specifications

| | |
|--------------------------|--|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 125 Watts |
| Frequency Range: | DC – 4.0 GHz |
| Return Loss | > 26 dB to 2.7 GHz > 20 dB to 4.0 GHz |

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

Outline Drawing

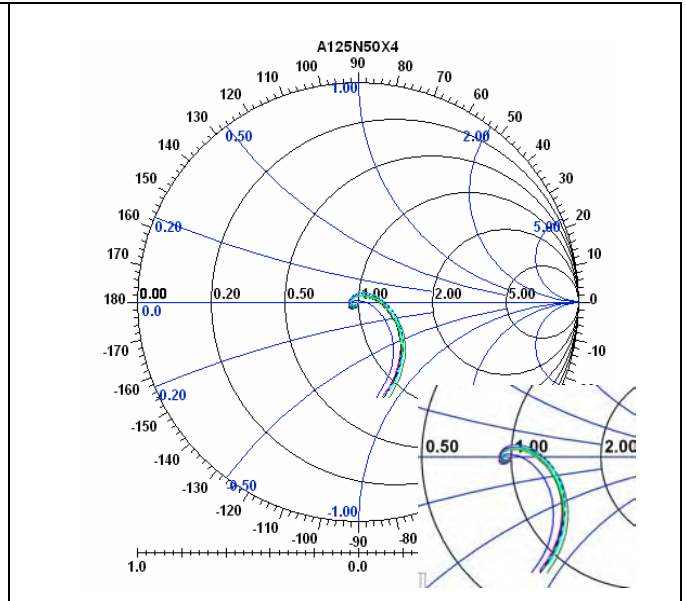
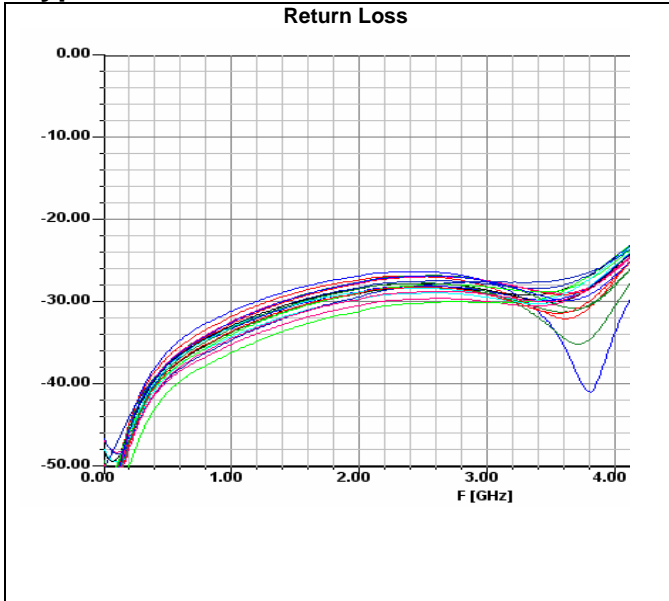


A125N50X4 (097) rev.D pg.1 of 2

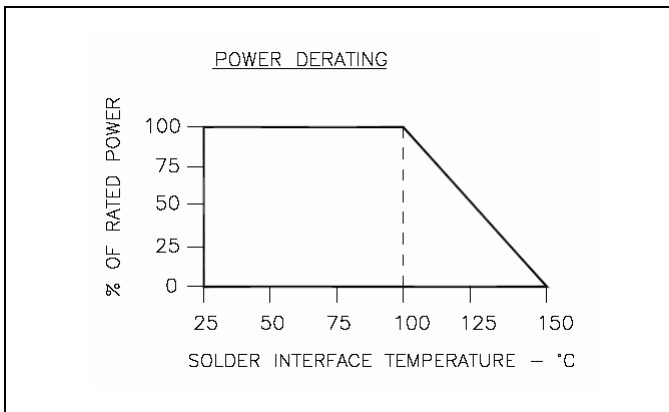




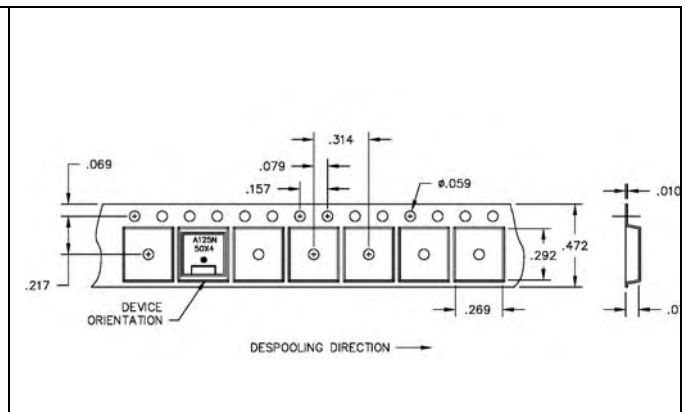
Typical Performance:



Power De-rating:

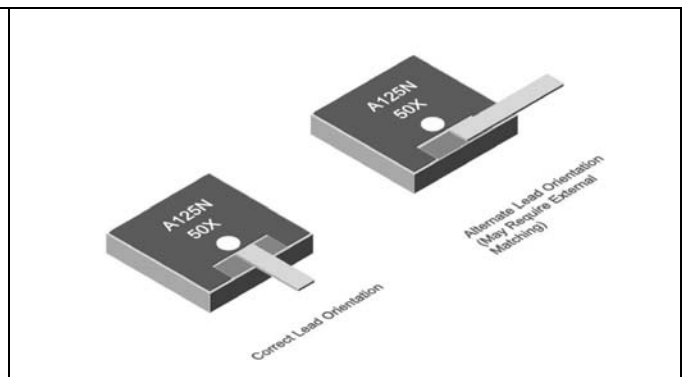


Tape & Reel:



Mounting Footprint and Procedure:

- MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
- POSITION DEVICE ON MOUNTING SURFACE AND SOLDER IN PLACE USING A LEAD FREE TYPE OR SN96 TYPE SOLDER.
- SOLDER LEADS IN PLACE USING AN SN96 TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON (250°C).





Chip Termination
150 Watts, 50Ω



Description

The A150N50X4B is high performance Aluminum Nitride (AlN) chip termination 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 combiners. The termination is also RoHS compliant!

Features:

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

General Specifications

| | |
|------------------------------|--------------------------------------|
| Resistive Element | Thick film |
| Substrate | AlN Ceramic |
| Terminal Finish | Matte Tin over Nickel Barrier |
| Operating Temperature | -55 to +200°C (see de rating chart) |

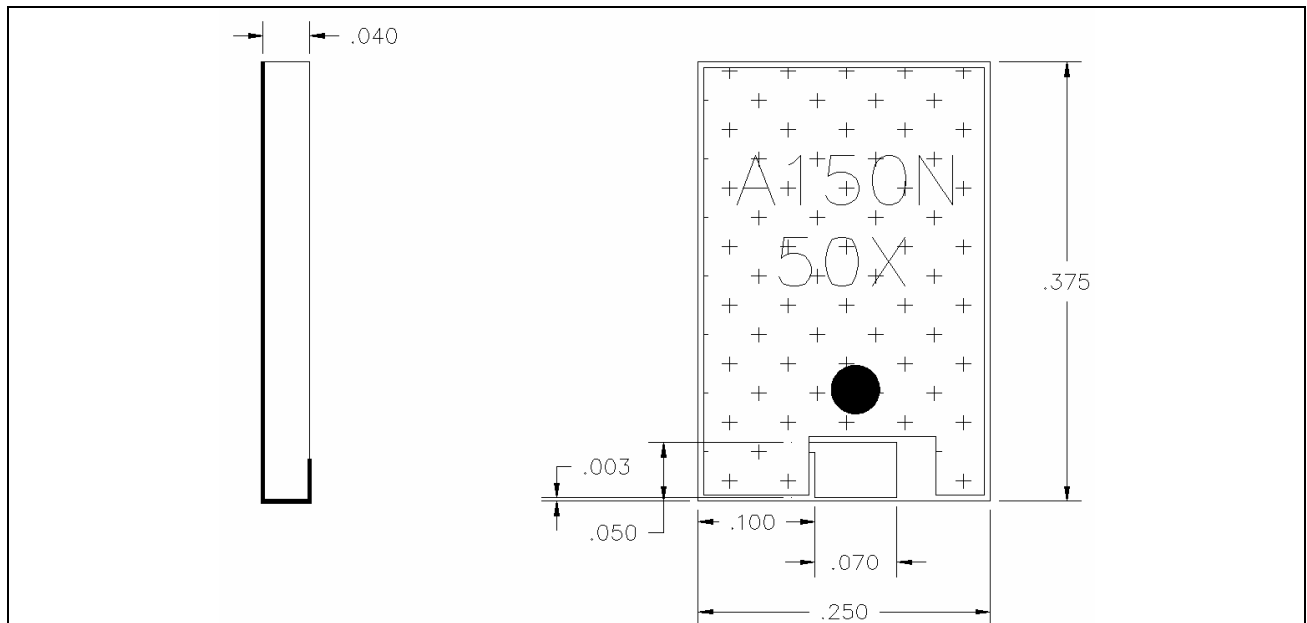
Tolerance is ± 0.010 ", unless otherwise specified. Designed to meet or exceed applicable portions of MIL-E-5400. All dimensions in inches.

Electrical Specifications

| | |
|--------------------------|--------------------------------------|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 150 Watts |
| Frequency Range: | DC – 2.7 GHz |
| Return Loss | >26dB to 2.0 GHz >20dB to 2.7 GHz |

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

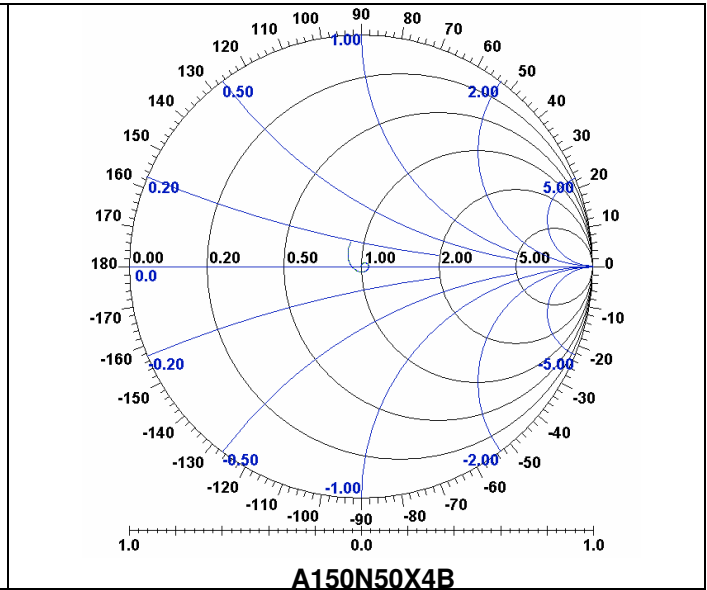
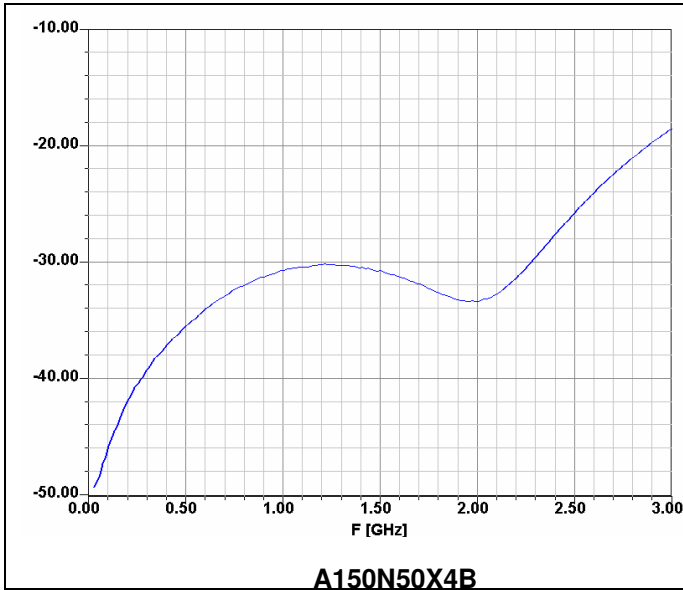
Outline Drawing



A150N50X4 (097) Rev E

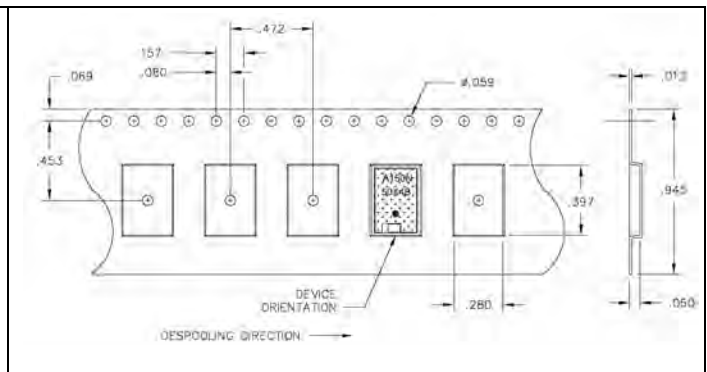
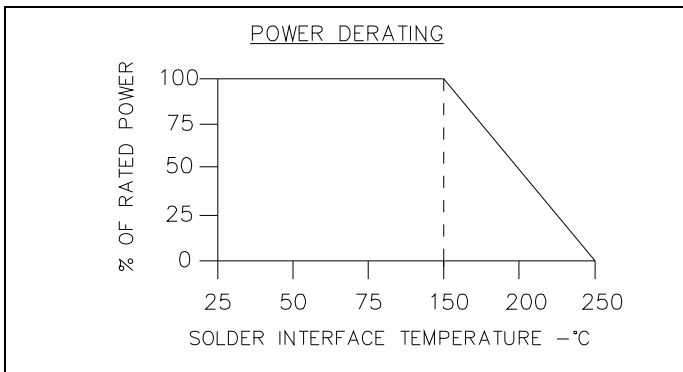


Typical Performance:



Power De-rating:

Tape & Reel:



Mounting Footprint and Procedure:

SUGGESTED STRESS RELIEF METHODS
SCALE: NONE

NOT RECOMMENDED APPLICATION
SCALE: NONE

SUGGESTED MOUNTING PROCEDURES:

1. MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
2. POSITION DEVICE ON MOUNTING SURFACE AND SOLDER IN PLACE USING SN96 SOLDER.
3. SOLDER LEADS IN PLACE USING AN SN96 TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON (260°C).

Correct Lead Orientation

**Alternate Lead Orientation
(May Require External Matching)**

A150N50X4 (097) Rev E

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Toll Free: (800) 544-2414
Europe: +44 2392-232392

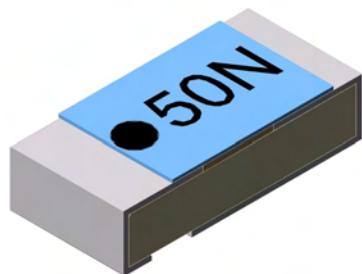
Available on Tape and Reel For Pick and Place Manufacturing.



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**RoHS
Compliant**

**Surface Mount Termination
10 Watts, 50Ω**



General Specifications

| | |
|---------------------------|--------------------------|
| Resistive Element: | Thick film |
| Terminations: | Thick film silver |
| Substrate: | Aluminum Nitride Ceramic |

Electrical Specifications

| | |
|--------------------------|----------------------------------|
| Resistance value: | 50 ohms |
| Frequency Range: | DC – 3.0 GHz |
| Power: | 10 Watts |
| VSWR: | 1.25:1 to 2 GHz, 1.43:1 to 3 GHz |

Tolerance is ± 0.010 ", unless otherwise specified. Designed to meet or exceed applicable portions of MIL-E-5400. Operating temperature is -55°C to 125°C (see chart for derating temperatures).

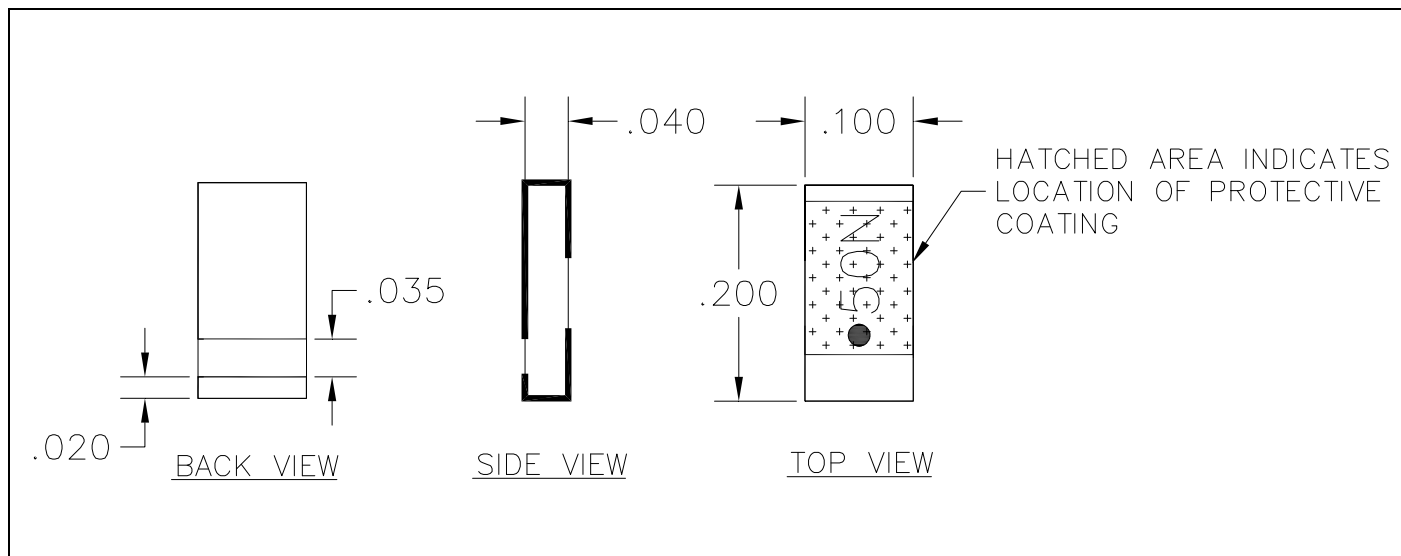
All dimensions in inches.

Specifications subject to change with out notice.

Features:

- DC – 3.0 GHz
- 10 Watts
- ALN Ceramic
- Non-Nichrome Resistive Element
- 100% Tested
- RoHS Compliant

Outline Drawing

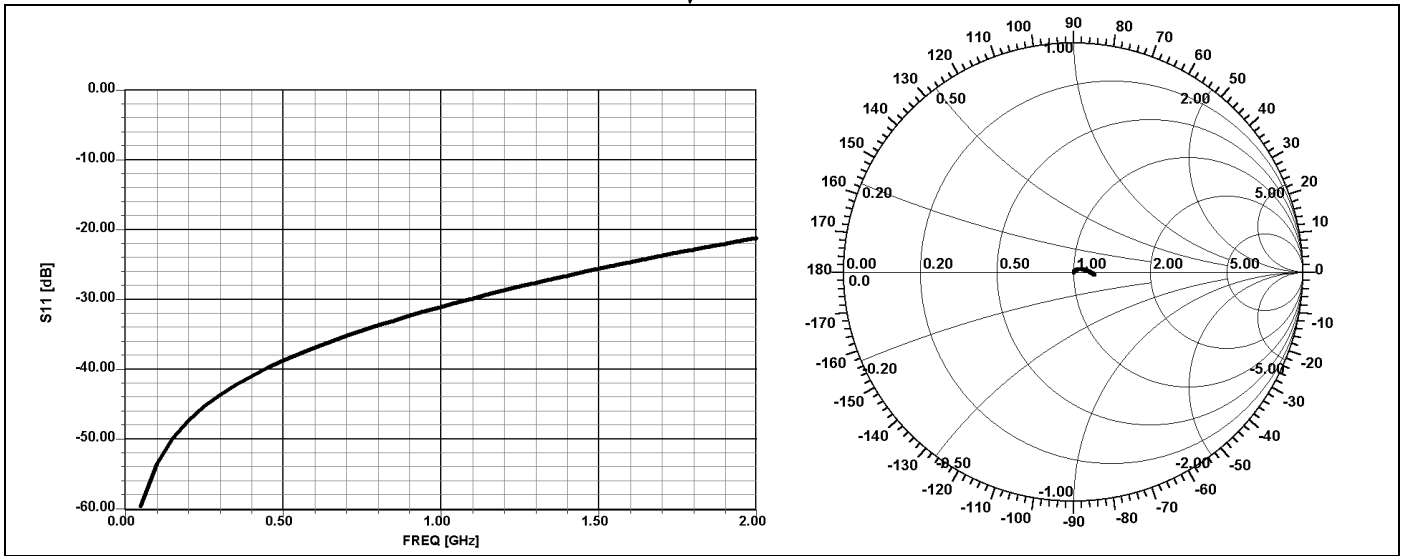


C10N50Z4A (097) Rev B

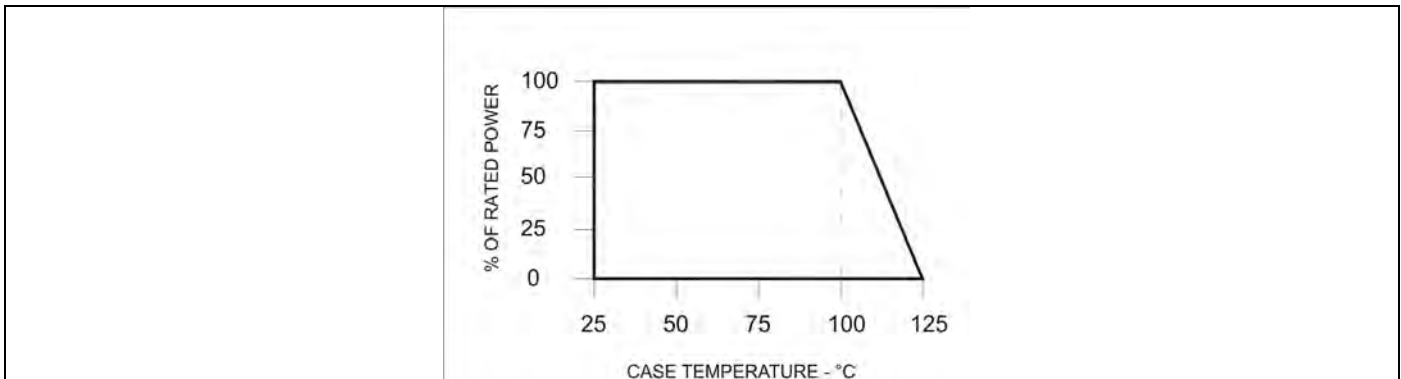




Typical Performance:



Power De-rating:



Mounting Procedure:

MOUNTING PROCEDURE

1. Make sure that the devices are mounted on flat surfaces (0.001" under the device) to optimize the heat transfer.
2. Position device on mounting surface and solder in place using an appropriate type solder.

C10N50Z4A (097) Rev B

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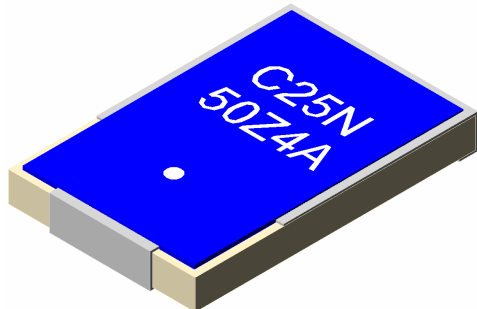
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**RoHS
Compliant**

**ALN SMT Termination
25 Watts, 50Ω**



General Specifications

| | |
|-------------------|------------------|
| Resistive Element | Thick film |
| Terminations | Matte Tin Finish |
| Substrate | Aluminum Nitride |

Electrical Specifications

| | |
|-------------------|--------------|
| Resistance value: | 50 ohms |
| Frequency Range; | DC – 3.0 GHz |
| Power: | 25 Watts |
| VSWR: | 1.25:1 |

Tolerance is ± 0.010 ", unless otherwise specified. Designed to meet or exceed applicable portions of MIL-E-5400. Operating temperature is -55°C to 125°C (see chart for derating temperatures).

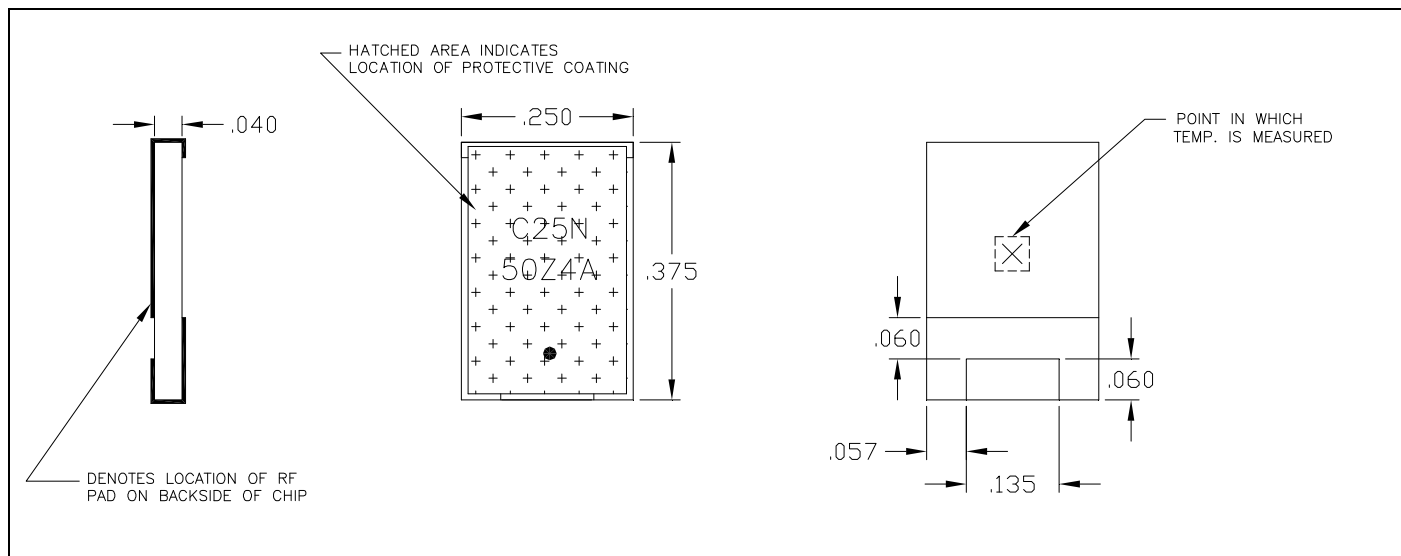
All dimensions in inches.

Specifications subject to change with out notice.

Features:

- DC – 3.0 GHz
- 25 Watts
- Aluminum Nitride Ceramic
- Non-Nichrome Resistive Element
- 100% Tested
- RoHS Compliant

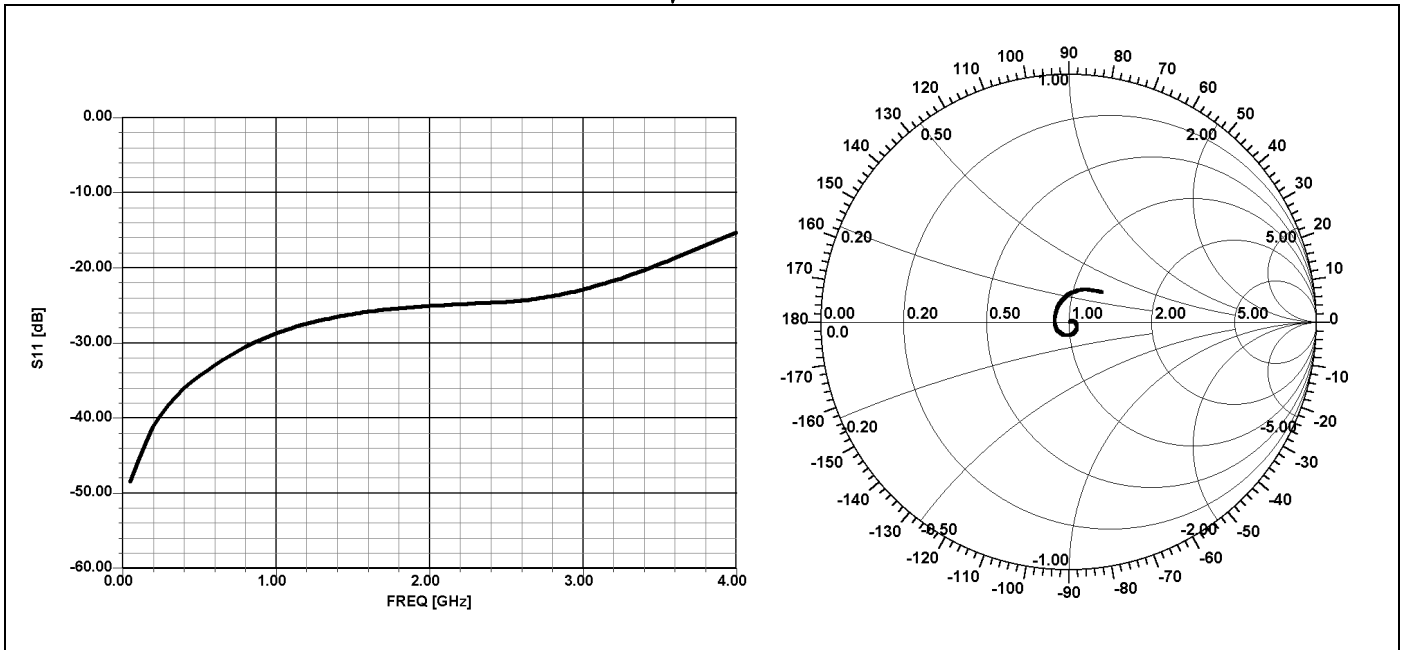
Outline Drawing



C25N50Z4A (097) Rev C

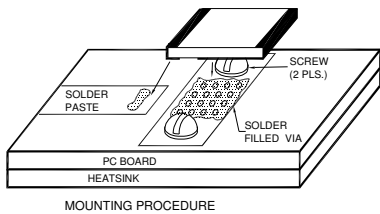


Typical performance

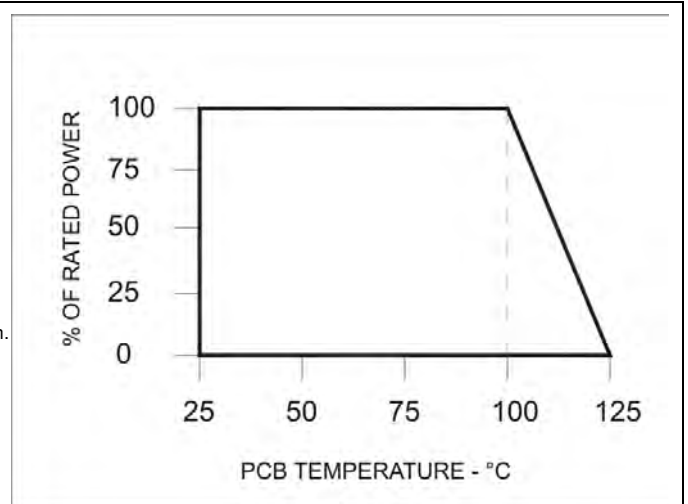


Mounting Procedure:

Power De-rating:



1. Solder part in place using SN96 type solder with a controlled temperature iron.
2. Drill thermal vias through PCB and fill with solder.
3. To ensure good thermal connectivity to heat sink, which is critical for proper operation drill and tap heatsink and mount PCB to heat sink using screws.



C25N50Z4A (097) Rev C

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Description

The C50A50Z4 is high performance Alumina (Al₂O₃) surface mount termination intended as a low cost alternative to Aluminum Oxide (AlN). 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 high power 90 degree couplers, and for use in microstrip circuits. The termination is also RoHS compliant!

General Specifications

| | |
|------------------------------|--|
| Resistive Element | Thick film |
| Substrate | Al ₂ O ₃ Ceramic |
| Terminal Finish | Matte Tin over Nickel Barrier |
| Operating Temperature | -55 to +125°C (see de rating chart) |

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

Features:

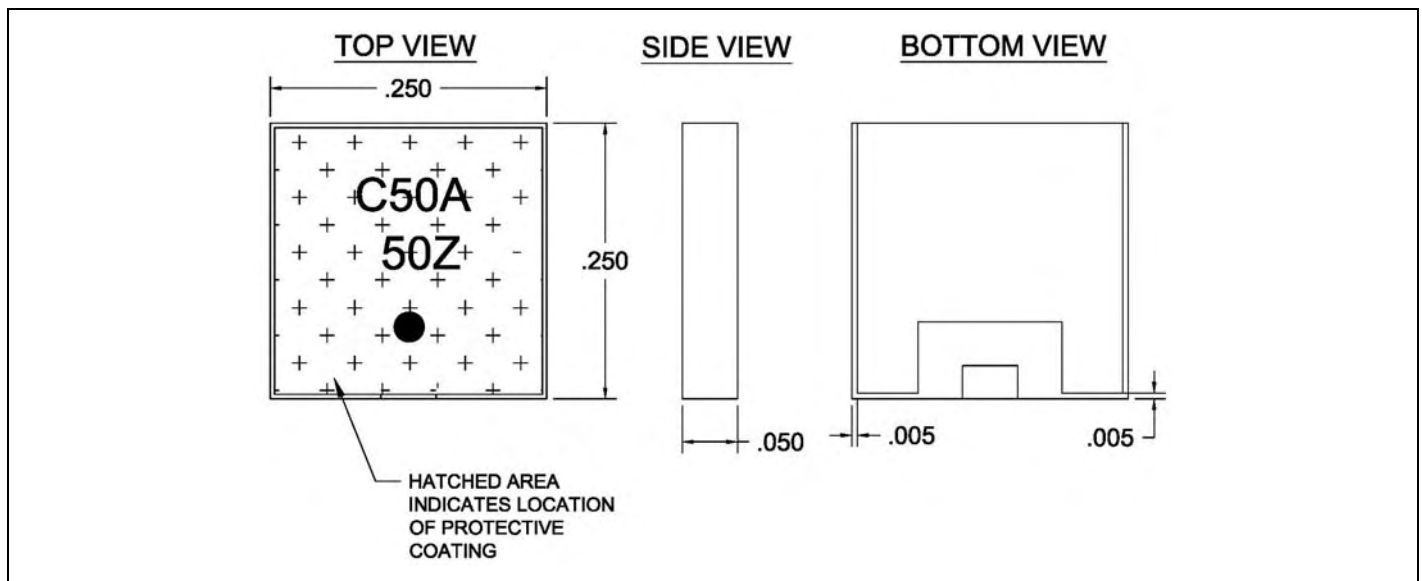
- RoHS Compliant
- 50 Watts
- DC - 2.7 GHz
- Al₂O₃ Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested
- Small Size

Electrical Specifications

| | |
|--------------------------|--|
| Resistance Value: | 50 Ohms, ± 2% |
| Power: | 50 Watts |
| Frequency Range: | DC – 2.7 GHz |
| Return Loss | >26 dB to 2.2 GHz >24 dB to 2.7 GHz |

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

Outline Drawing

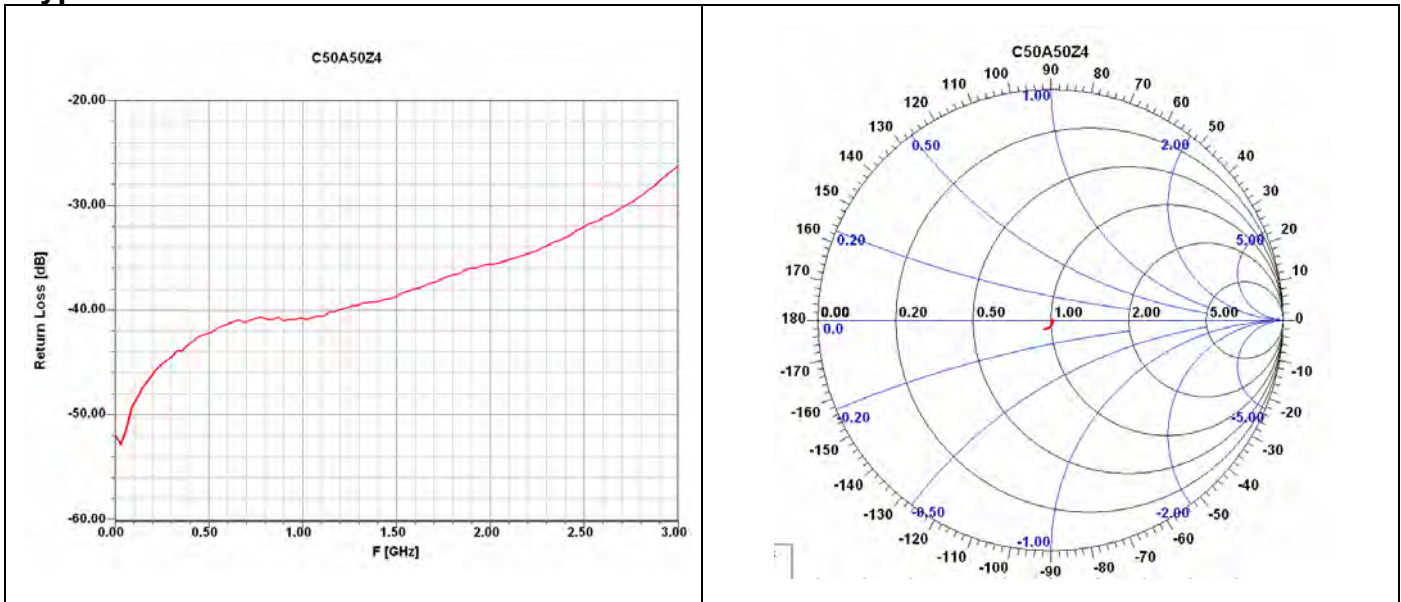


C50A50Z4 (097) rev.C pg. 1 of 2

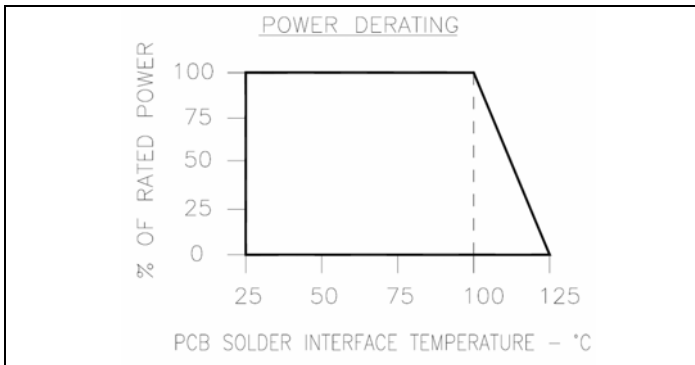




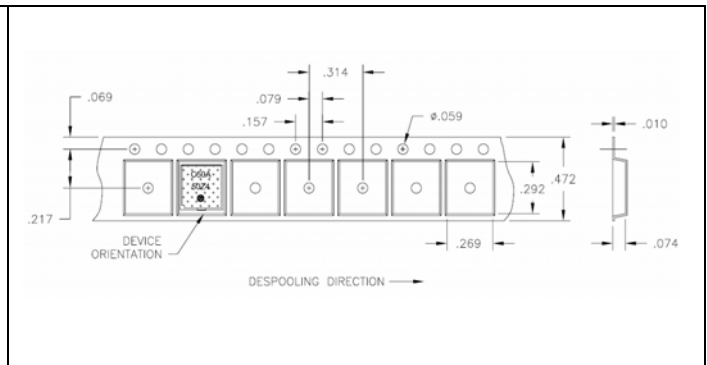
Typical Performance:



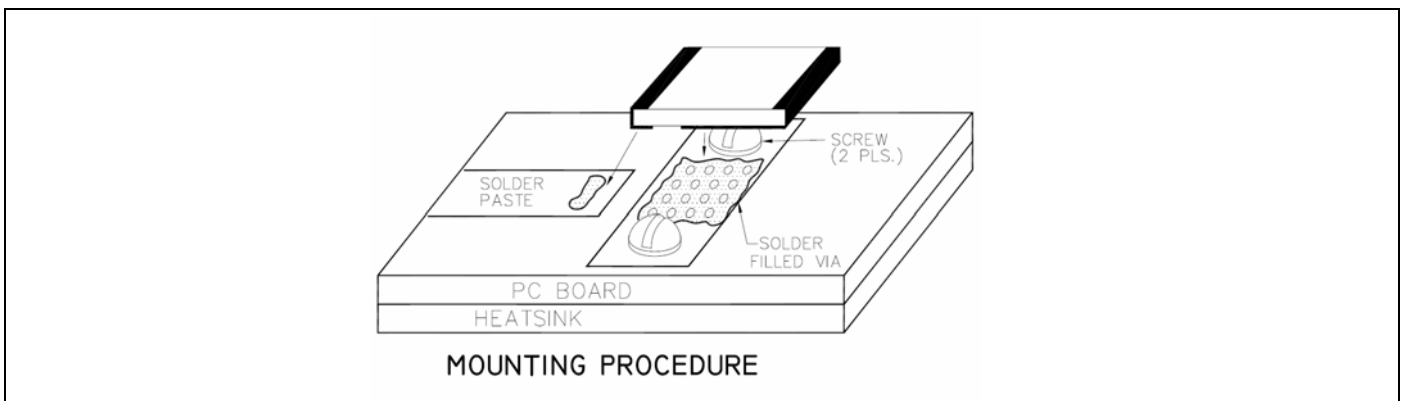
Power De-rating:



Tape & Reel:



Mounting Footprint and Procedure:



C50A50Z4 (097) rev.C pg. 2 of 2

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Surface Mount Termination 100 Watts, 50Ω



Description

The C100N50Z4 is high performance Aluminum Nitride (AlN) surface mount termination 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 high power 90 degree couplers, and for use in microstrip circuits. The termination is also RoHS compliant!

General Specifications

| | |
|------------------------------|-------------------------------------|
| Resistive Element | Thick film |
| Substrate | AlN Ceramic |
| Terminal Finish | Matte Tin over Nickel Barrier |
| Operating Temperature | -55 to +125°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.

Electrical Specifications

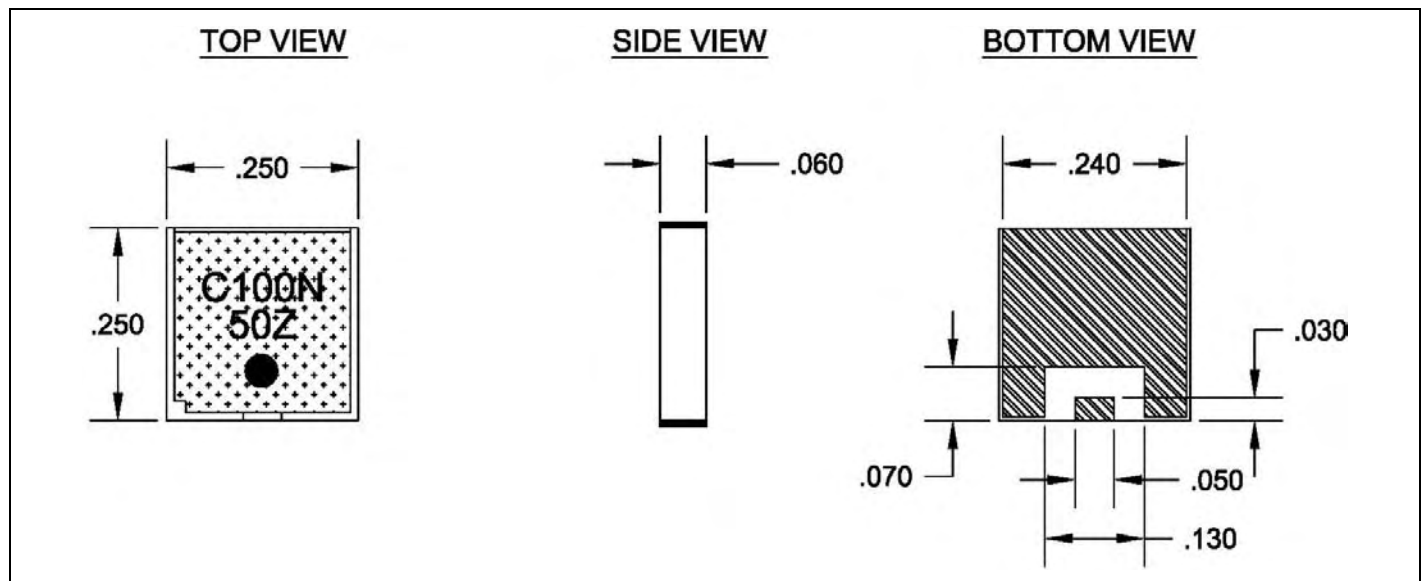
| | |
|--------------------------|--|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 100 Watts |
| Frequency Range: | DC – 4.0 GHz |
| Return Loss | >24 dB DC - 2.7 GHz >20 dB DC - 4.0 GHz |

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

Features:

- RoHS Compliant
- 100 Watts
- DC – 4.0 GHz
- AlN Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested
- Small Size

Outline Drawing



C100N50Z4 (097) rev.C pg. 1 of 2



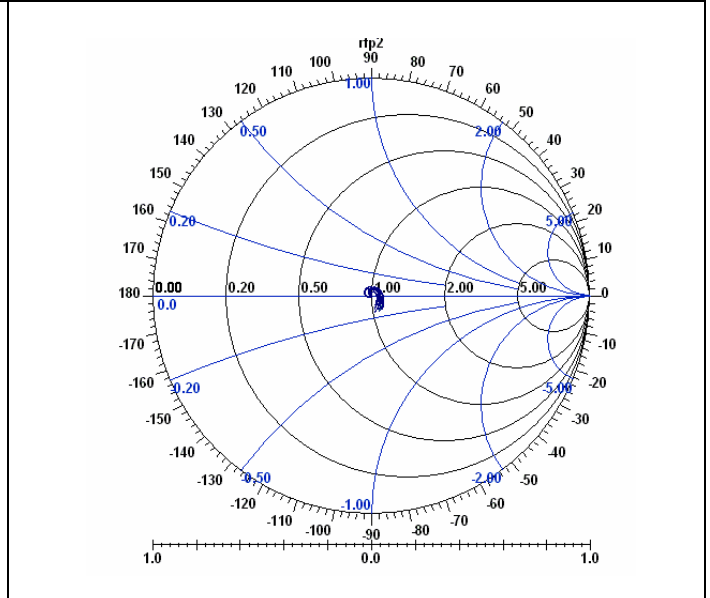
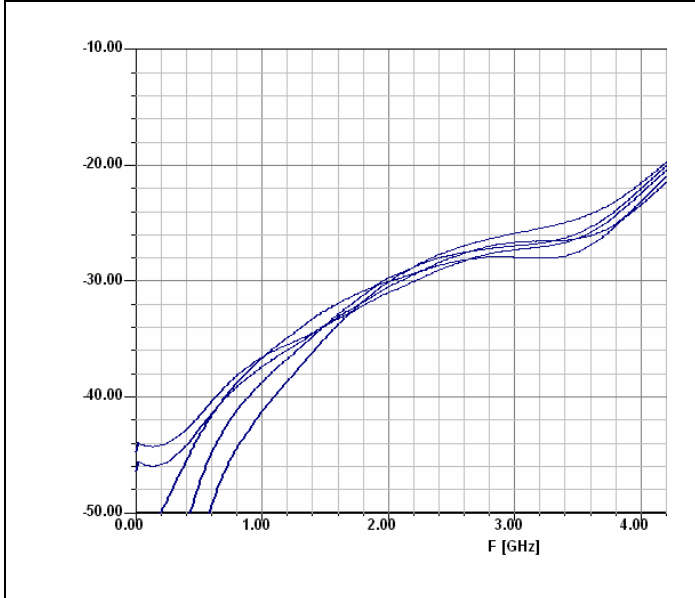
Model C100N50Z4

ROHS
Compliant

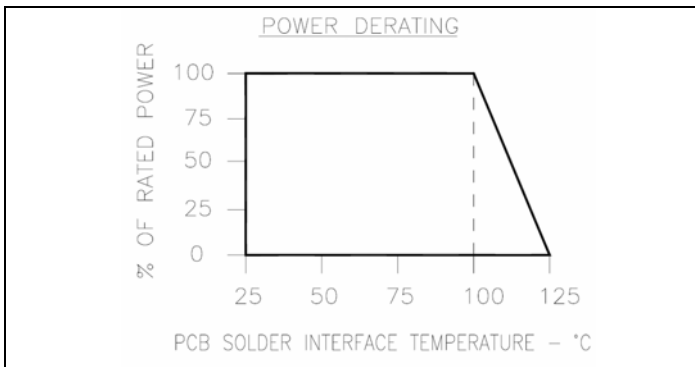
Anaren

RF Power

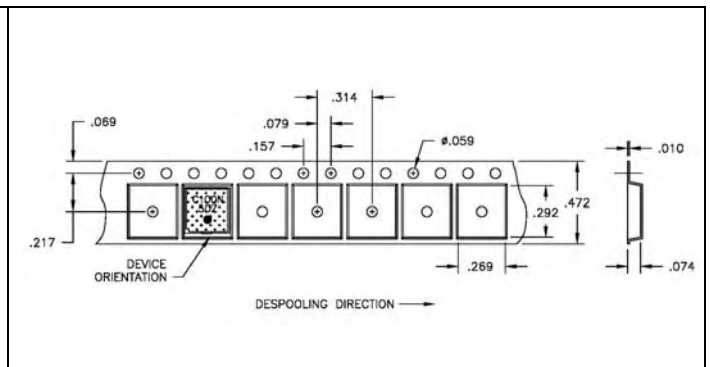
Typical Performance:



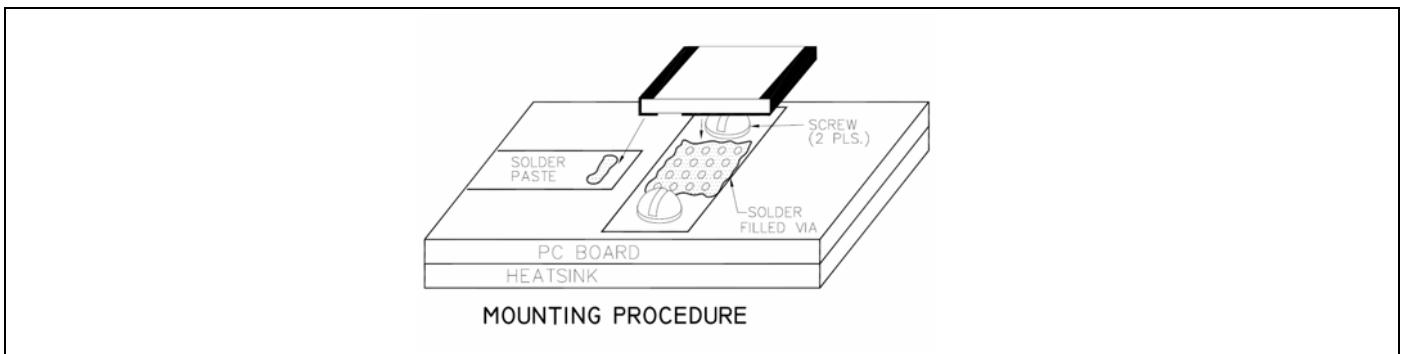
Power De-rating:



Tape & Reel:



Mounting Footprint and Procedure:



C100N50Z4 (097) rev.C pg. 2 of 2

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Flangeless Mount Termination 150 Watts, 50Ω



Description

The E150N50X4 is high performance Aluminum Nitride (AlN) termination 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 combiners. The termination is also RoHS compliant!

General Specifications

| | |
|--------------------------|-----------------------|
| Resistive Element | Thick Film |
| Substrate | AlN Ceramic |
| Finish | Matte Tin over Nickel |
| Cover | Alumina Ceramic |

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

Features:

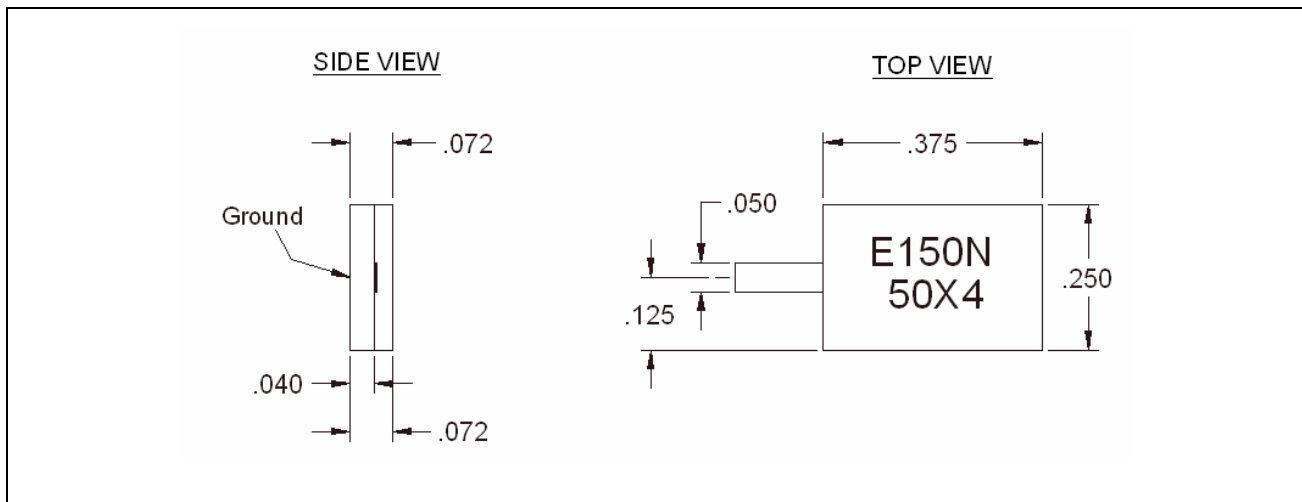
- RoHS Compliant
- 150 Watts
- DC – 2.7GHz
- AlN Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested

Electrical Specifications

| | |
|--------------------------|--|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 150 Watts |
| Frequency Range: | DC – 2.7 GHz |
| Return Loss | > 25 dB DC – 2.0 GHz > 20 dB DC – 2.7 GHz |

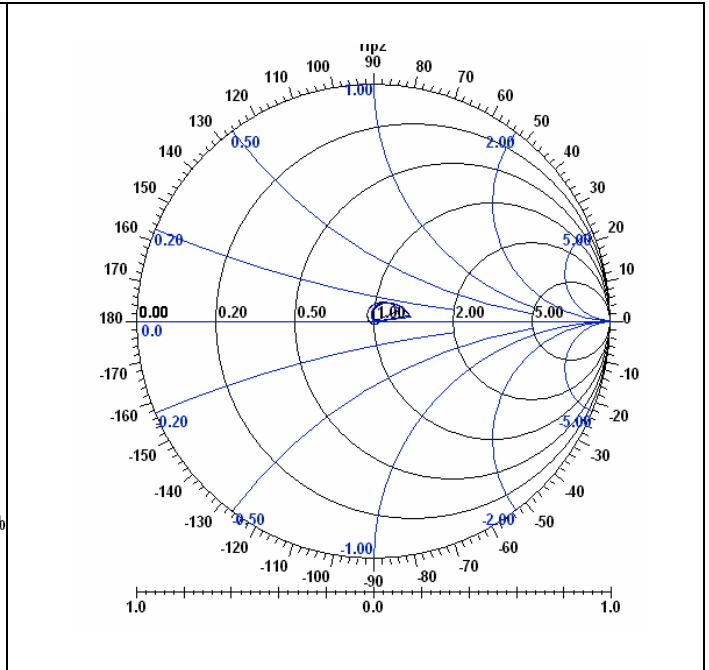
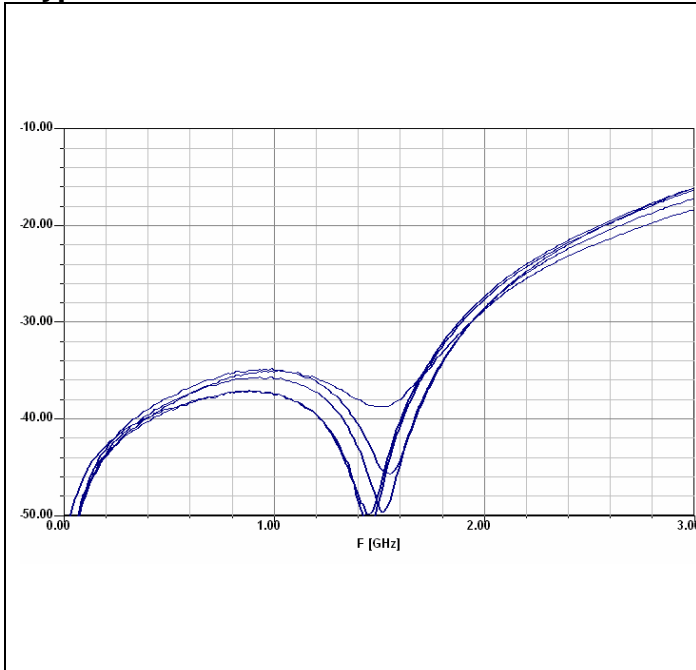
Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. **Specifications subject to change.**

Outline Drawing



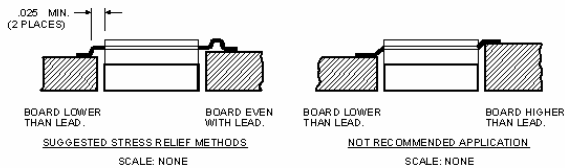
E150N50X4 (097) rev.E pg. 1 of 2

Typical Performance:



Power De-rating:

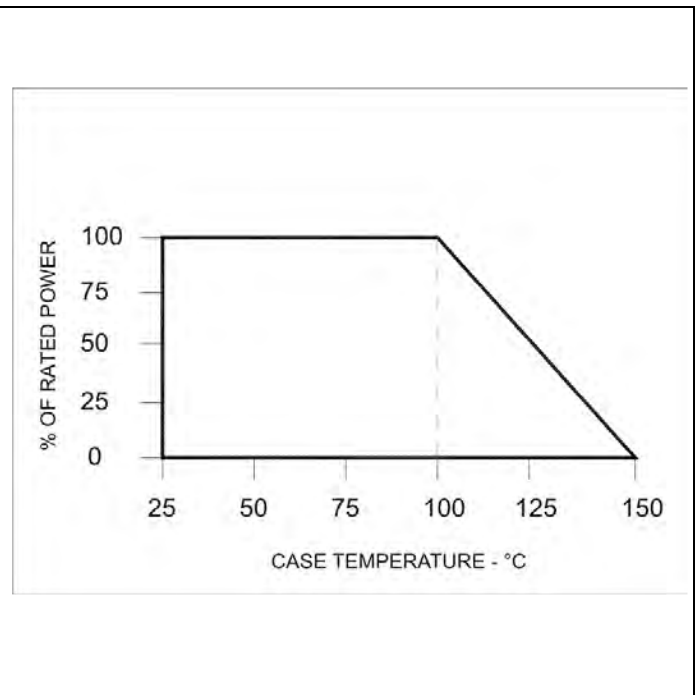
Mounting Footprint and Procedure:



SUGGESTED MOUNTING PROCEDURES:

1. MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
2. DRILL & TAP THE HEATSINK FOR THE APPROPRIATE THREAD SIZE TO BE USED.
3. COAT HEATSINK WITH A MINIMUM AMOUNT OF HIGH QUALITY SILICONE GREASE (.001" MAX. THICKNESS).
4. POSITION DEVICE ON MOUNTING SURFACE & SECURE USING SOCKET HEAD SCREWS, FLAT & SPLIT WASHER. TORQUE SCREWS TO THE APPROPRIATE VALUE. MAKE SURE THAT THE DEVICE IS FLAT AGAINST THE HEATSINK (CARE SHOULD BE TAKEN TO AVOID UPWARD PRESSURE OF THE LEADS TOWARDS THE LID).
5. SOLDER LEADS IN PLACE USING LEAD FREE TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON

** FOR MORE DETAILS CONTACT FACTORY **



**RoHS
Compliant**

**Surface Mount Termination
16 Watts, 50Ω**



General Specifications

| | |
|--------------------------|---------------------------------|
| Resistive Element | Thick film |
| Finish | Matte Tin over Sulfamate Nickel |
| Substrate | ALN |

Electrical Specifications

| | |
|--------------------------|--------------|
| Resistance value: | 50 ohms |
| Frequency Range; | DC – 3.0 GHz |
| Power: | 16 Watts |
| VSWR: | <1.25:1 |

Tolerance is ± 0.010 ", unless otherwise specified. Designed to meet or exceed applicable portions of MIL-E-5400. Operating temperature is -55°C to 125°C (see chart for derating temperatures).

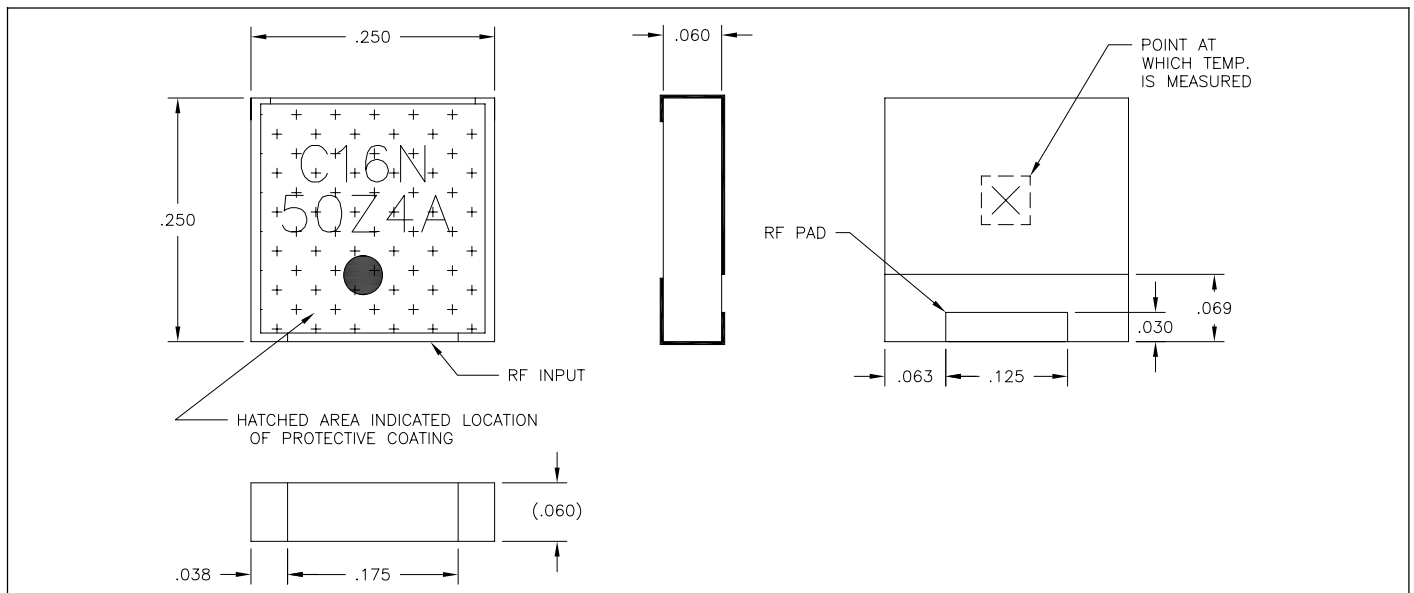
All dimensions in inches.

Specifications subject to change without notice.

Features:

- DC – 3.0 GHz
- 16 Watts
- ALN Ceramic
- Non-Nichrome Resistive Element
- 100% Tested
- RoHS Compliant

Outline Drawing

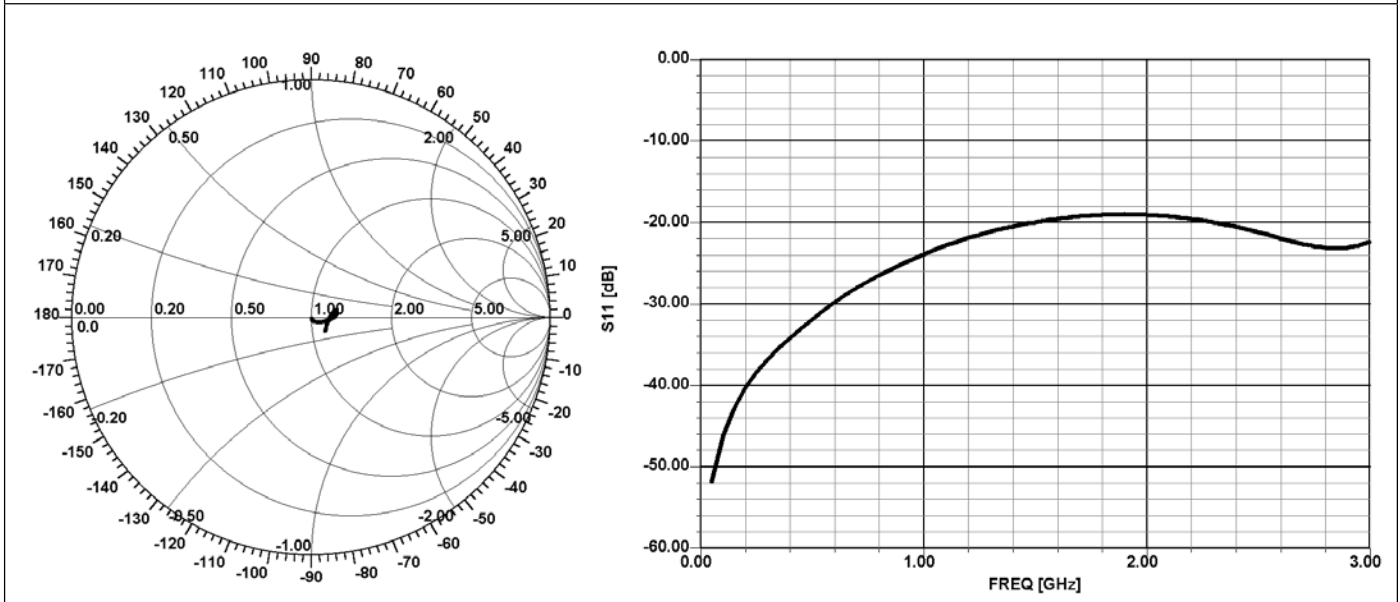


C16N50Z4A (097) Rev B



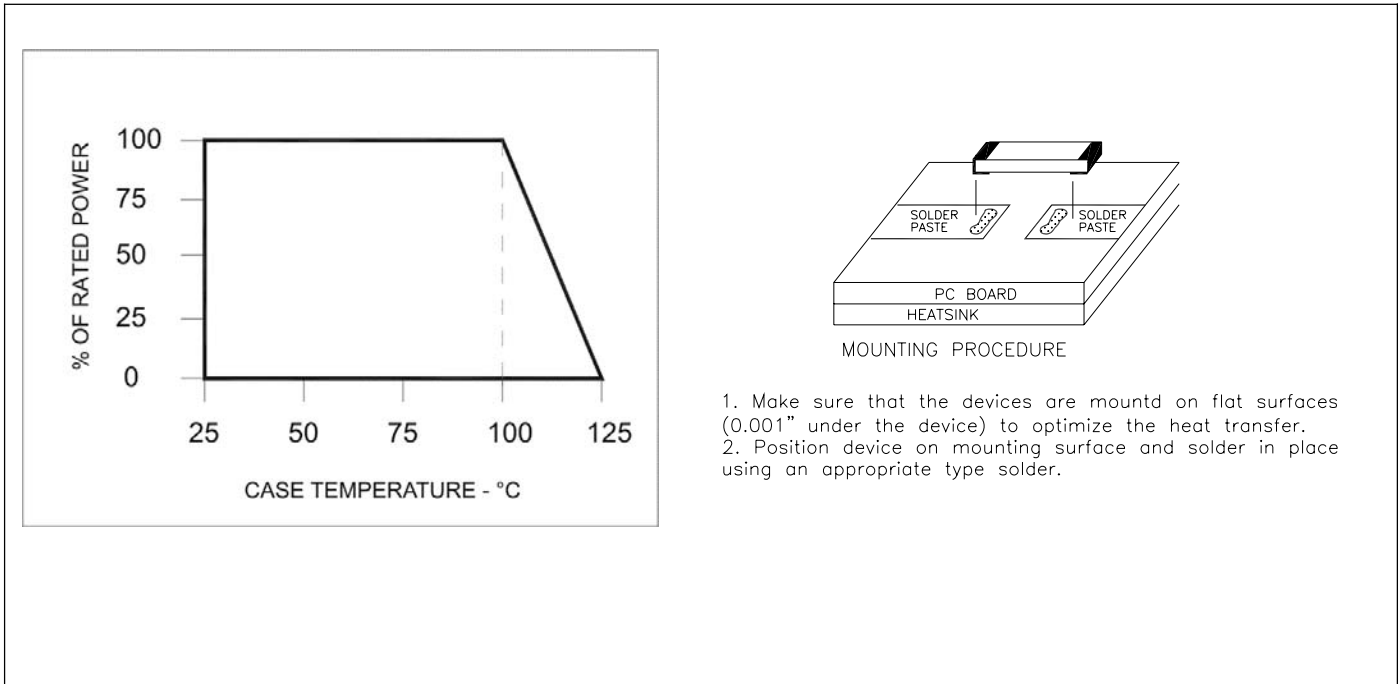


Typical Performance:



Power De-rating:

Mounting Procedure:



C16N50Z4A (097) Rev B

USA/Canada: (315) 432-8909
 Toll Free: (800) 544-2414
 Europe: +44 2392-232392

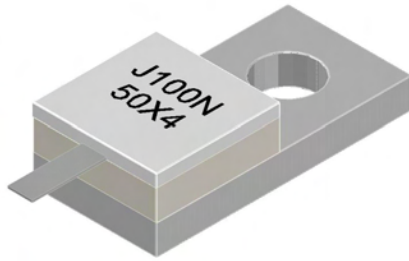
Available on Tape and Reel For Pick and Place Manufacturing.



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ROHS
Compliant

Half Flange Termination 100 Watts, 50Ω



Description

The J100N50X4 is high performance Aluminum Nitride (AlN) half flange termination 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 combiners. The termination is also RoHS compliant!

General Specifications

| | |
|--------------------------|------------------------------------|
| Resistive Element | Thick Film |
| Substrate | AlN Ceramic |
| Cover | Alumina Ceramic |
| Mounting Flange | Copper, nickel plated per QC-N-290 |
| Leads | 99% pure silver (.006" thick) |
| Cover | Alumina Ceramic |

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

Features:

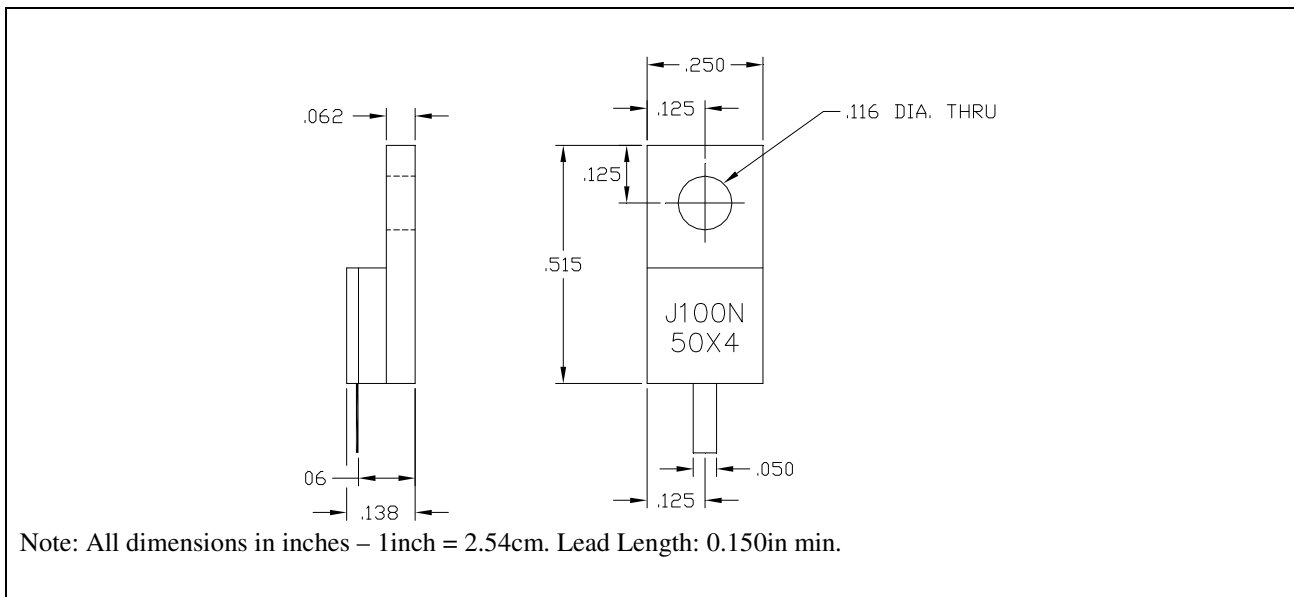
- RoHS Compliant
- 100 Watts
- DC – 3.0 GHz
- AlN Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested

Electrical Specifications

| | |
|--------------------------|--------------------|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 100 Watts |
| Frequency Range: | DC – 3.0GHz |
| V.S.W.R. | 1.25 : 1 |

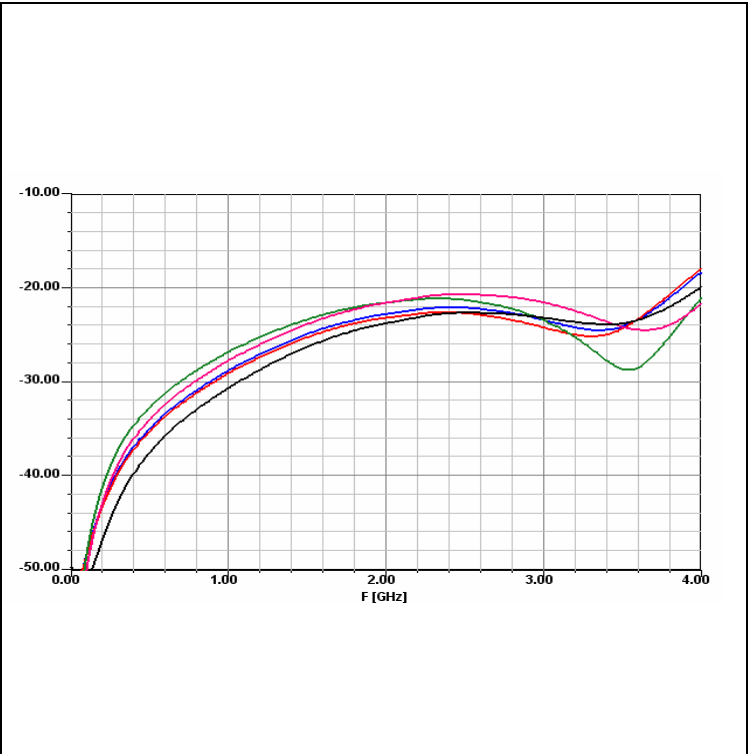
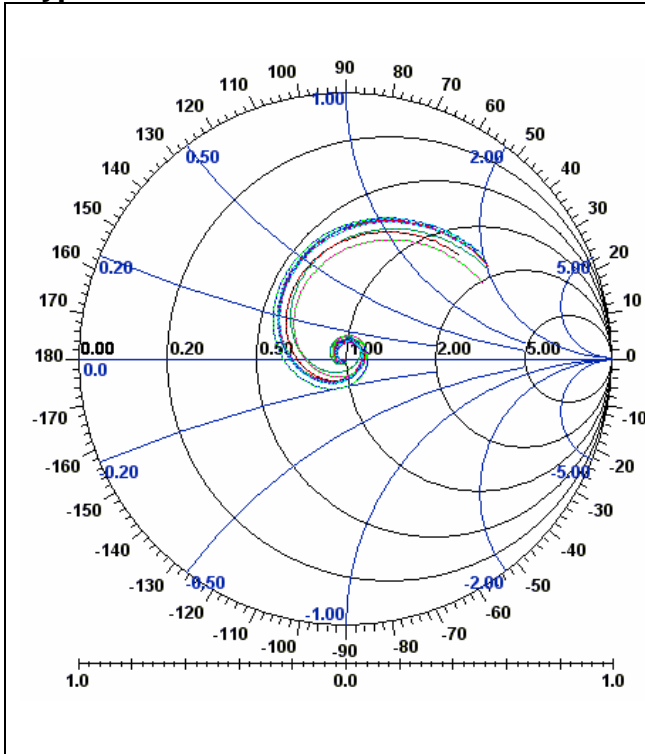
Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. Storage temperature is -20°C to 85°C . Operating temperature is -55°C to 125°C (see chart for derating temperatures). **Specifications subject to change with out notice.**

Outline Drawing

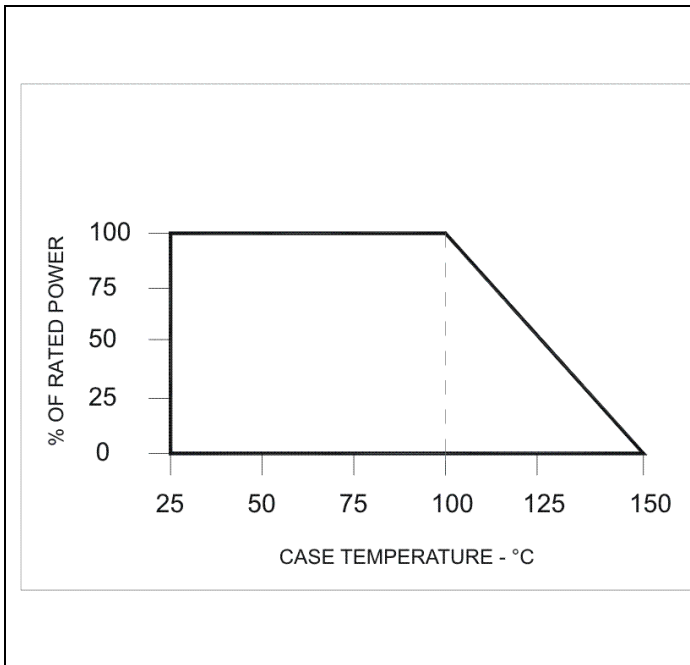


J100N50X4 (097) Rev D.

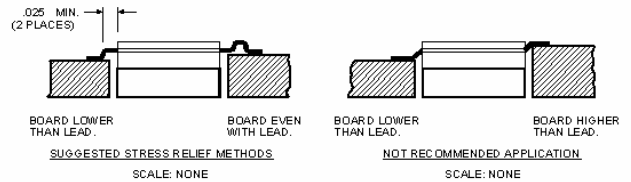
Typical Performance:



Power De-rating:



Mounting Footprint and Procedure:



SUGGESTED MOUNTING PROCEDURES:

1. MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
2. DRILL & TAP THE HEATSINK FOR THE APPROPRIATE THREAD SIZE TO BE USED.
3. COAT HEATSINK WITH A MINIMUM AMOUNT OF HIGH QUALITY SILICONE GREASE (.001" MAX. THICKNESS).
4. POSITION DEVICE ON MOUNTING SURFACE & SECURE USING SOCKET HEAD SCREWS, FLAT & SPLIT WASHER. TORQUE SCREWS TO THE APPROPRIATE VALUE. **MAKE SURE THAT THE DEVICE IS FLAT AGAINST THE HEATSINK (CARE SHOULD BE TAKEN TO AVOID UPWARD PRESSURE OF THE LEADS TOWARDS THE LID).**
5. SOLDER LEADS IN PLACE USING LEAD FREE TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON

** FOR MORE DETAILS CONTACT FACTORY **



**RoHS
Compliant**

**Surface Mount Termination
16 Watts, 50Ω**

Description



The C16A50Z4 is high performance Alumina (Al_2O_3) surface mount termination intended as a low cost alternative to Aluminum Oxide (AlN). 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 high power 90 degree couplers, and for use in microstrip circuits. The termination is also RoHS compliant!

General Specifications

| | |
|------------------------------|-------------------------------------|
| Resistive Element | Thick film |
| Substrate | Al_2O_3 Ceramic |
| Terminal Finish | Matte Tin over Nickel Barrier |
| Operating Temperature | -55 to +125°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:

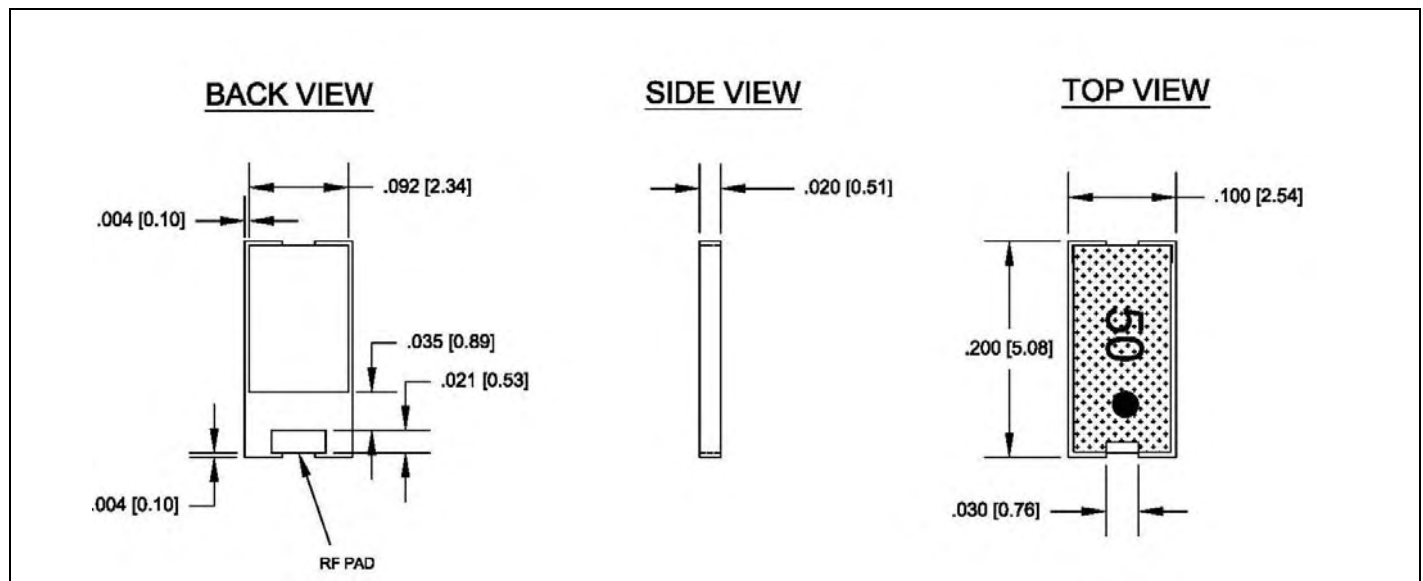
- RoHS Compliant
- 16 Watts
- DC – 4.0 GHz
- Al_2O_3 Ceramic
- Non-Nichrome Resistive Element
- Low Return Loss
- 100% Tested
- Small Size

Electrical Specifications

| | |
|--------------------------|--|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 16 Watts |
| Frequency Range: | DC – 4.0 GHz |
| Return Loss | > 26 dB DC to 2.7 GHz > 24 dB 2.7 GHz to 4.0GHz |

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

Outline Drawing

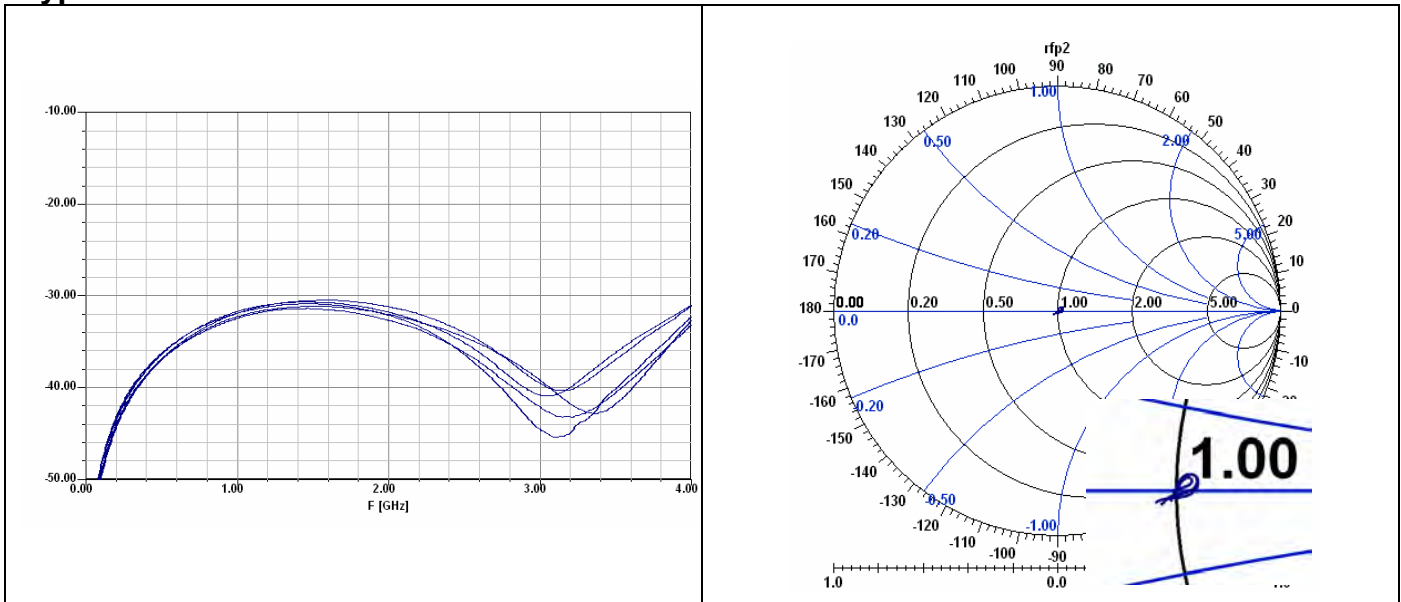


C16A50Z4 (097) rev.E pg. 1 of 2

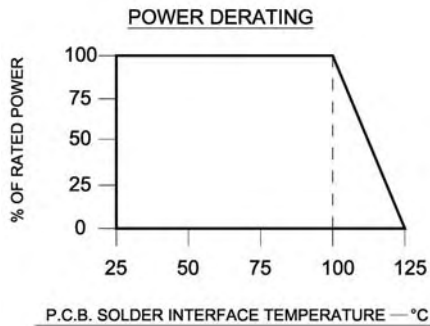




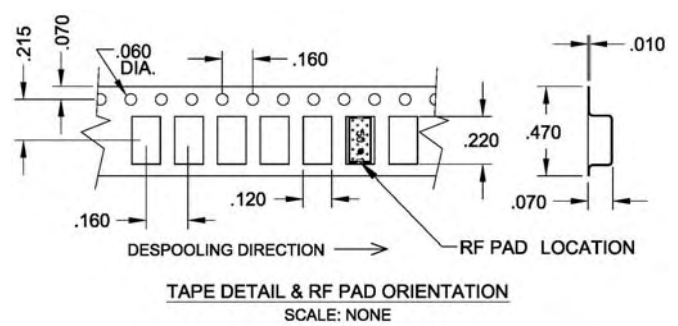
Typical Performance:



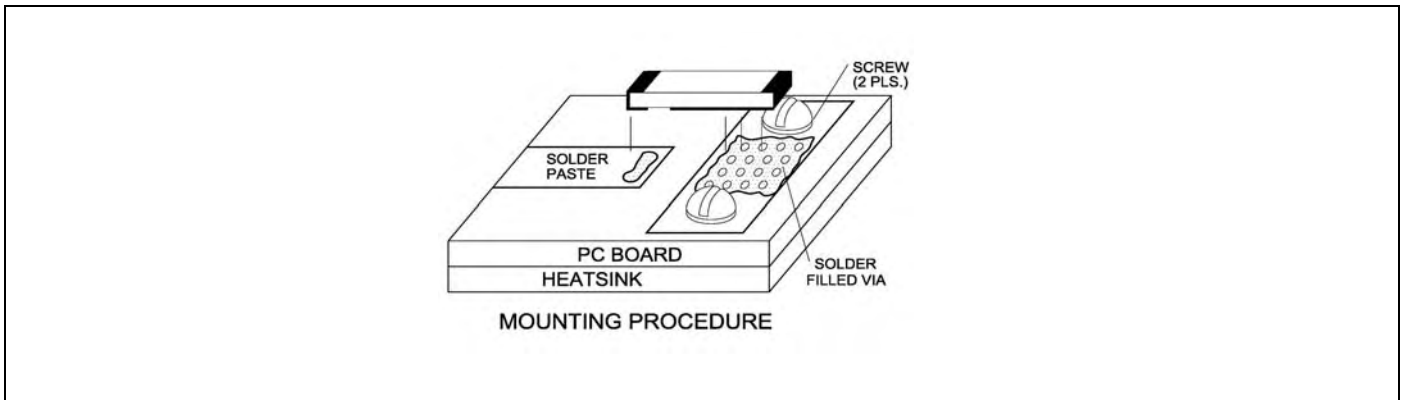
Power De-rating:



Tape & Reel:



Mounting Footprint and Procedure:





Half Flange Termination 100 Watts, 50Ω



Description

The K100N50X4 is high performance Aluminum Nitride (AlN) half flange termination 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 combiners. The termination is also RoHS compliant!

General Specifications

| | |
|--------------------------|------------------------------------|
| Resistive Element | Thick Film |
| Substrate | AlN Ceramic |
| Cover | Alumina Ceramic |
| Mounting Flange | Copper, nickel plated per QC-N-290 |
| Leads | 99% pure silver (.006" thick) |

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

Features:

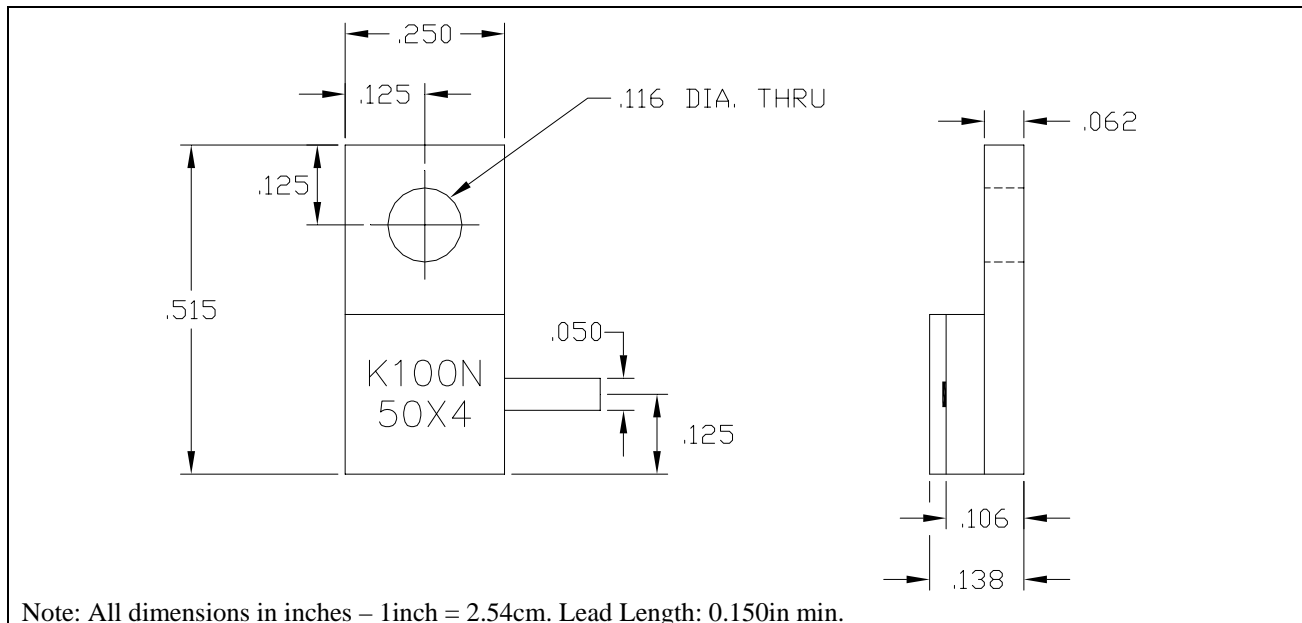
- RoHS Compliant
- 100 Watts
- DC – 3.0 GHz
- AlN Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested

Electrical Specifications

| | |
|--------------------------|--------------------|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 100 Watts |
| Frequency Range: | DC – 3.0GHz |
| V.S.W.R. | 1.25 : 1 |

Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. Storage temperature is -20°C to 85°C . Operating temperature is -55°C to 125°C (see chart for derating temperatures). **Specifications subject to change with out notice.**

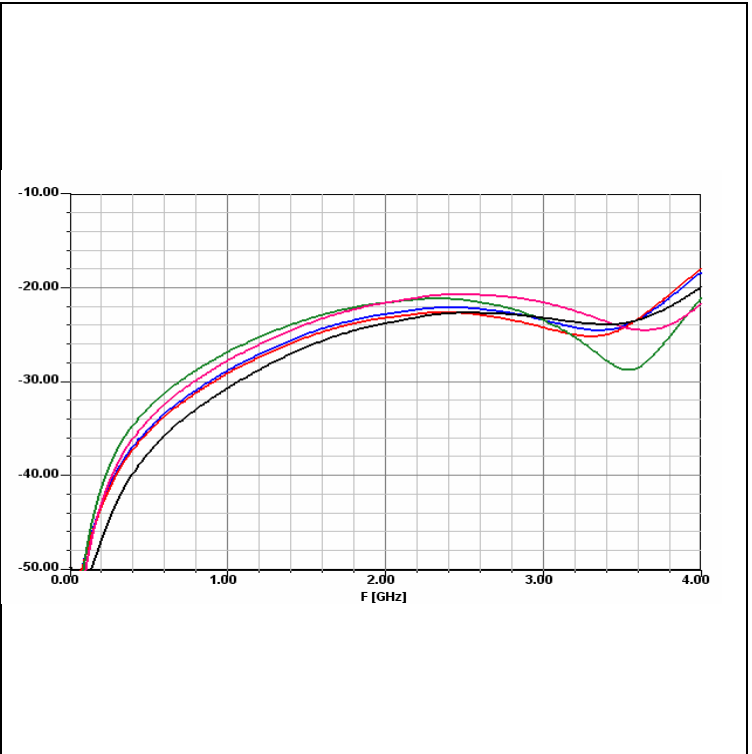
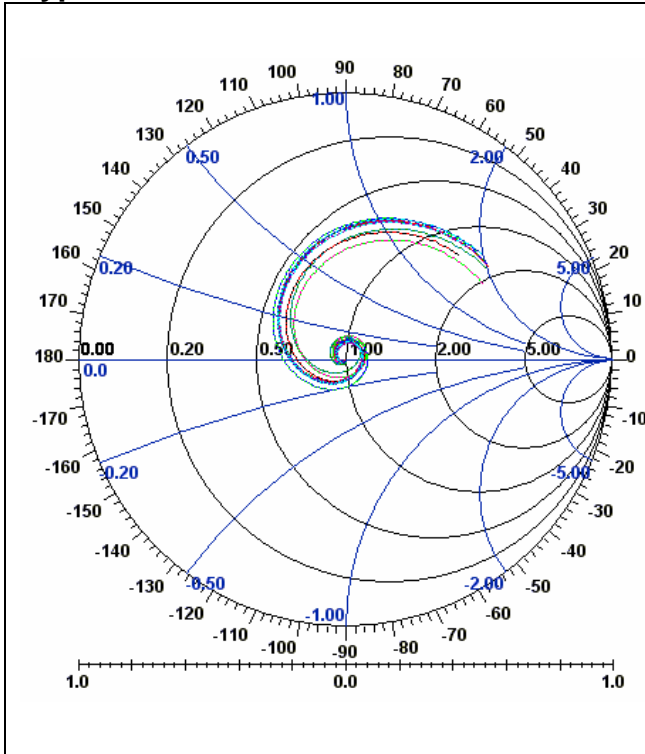
Outline Drawing



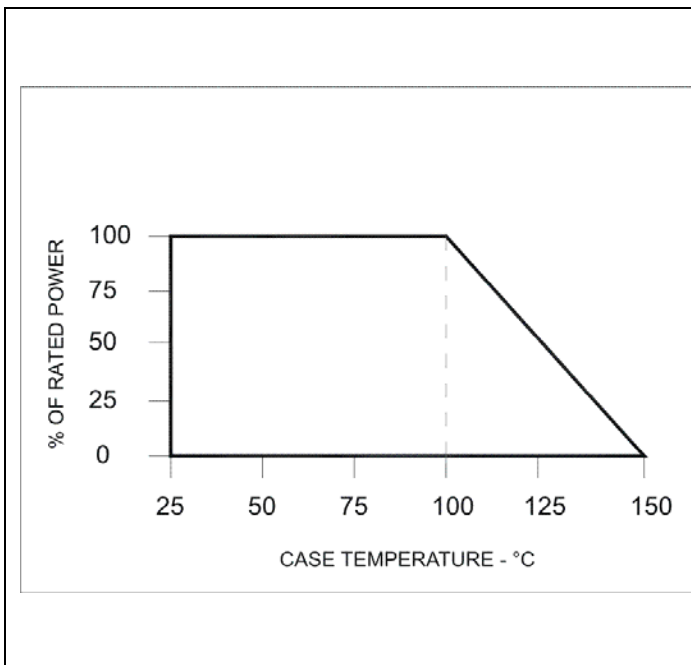
Note: All dimensions in inches – 1inch = 2.54cm. Lead Length: 0.150in min.

K100N50X4 (097) Rev D.

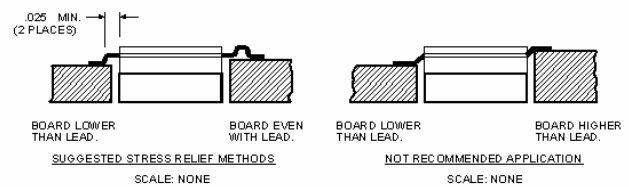
Typical Performance:



Power De-rating:



Mounting Footprint and Procedure:



SUGGESTED MOUNTING PROCEDURES:

1. MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
2. DRILL & TAP THE HEATSINK FOR THE APPROPRIATE THREAD SIZE TO BE USED.
3. COAT HEATSINK WITH A MINIMUM AMOUNT OF HIGH QUALITY SILICONE GREASE (.001" MAX. THICKNESS).
4. POSITION DEVICE ON MOUNTING SURFACE & SECURE USING SOCKET HEAD SCREWS, FLAT & SPLIT WASHER. TORQUE SCREWS TO THE APPROPRIATE VALUE. **MAKE SURE THAT THE DEVICE IS FLAT AGAINST THE HEATSINK (CARE SHOULD BE TAKEN TO AVOID UPWARD PRESSURE OF THE LEADS TOWARDS THE LID).**
5. SOLDER LEADS IN PLACE USING LEAD FREE TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON

** FOR MORE DETAILS CONTACT FACTORY **

K100N50X4 (097) Rev D



Flange Mount Termination 100 Watts, 50Ω



Description

The I100N50X4 is high performance Aluminum Nitride (AlN) flange mount termination 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 combiners. The termination is also RoHS compliant!

General Specifications

| | |
|--------------------------|-----------------|
| Resistive Element | Thick Film |
| Substrate | AlN Ceramic |
| Cover | Alumina Ceramic |

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

Features:

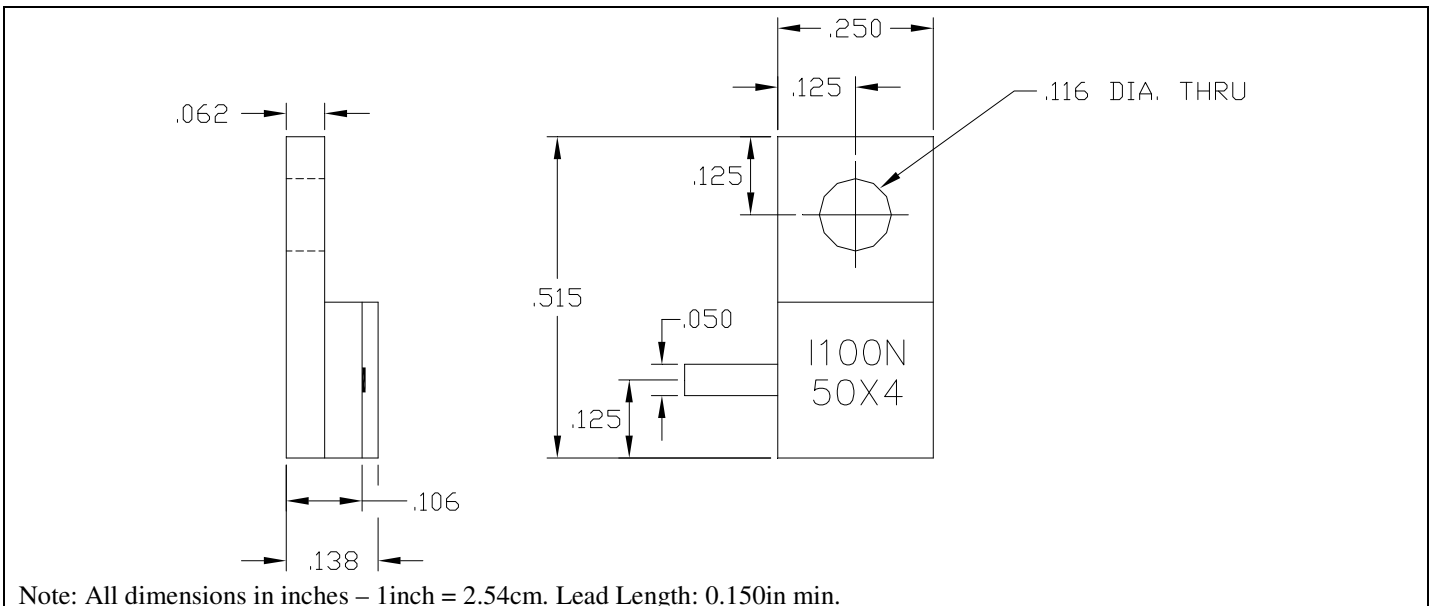
- RoHS Compliant
- 100 Watts
- DC – 3.0 GHz
- AlN Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested

Electrical Specifications

| | |
|--------------------------|--------------------|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 100 Watts |
| Frequency Range: | DC – 3.0GHz |
| V.S.W.R. | 1.25 : 1 |

Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. Storage temperature is -20°C to 85°C . Operating temperature is -55°C to 125°C (see chart for derating temperatures). **Specifications subject to change with out notice.**

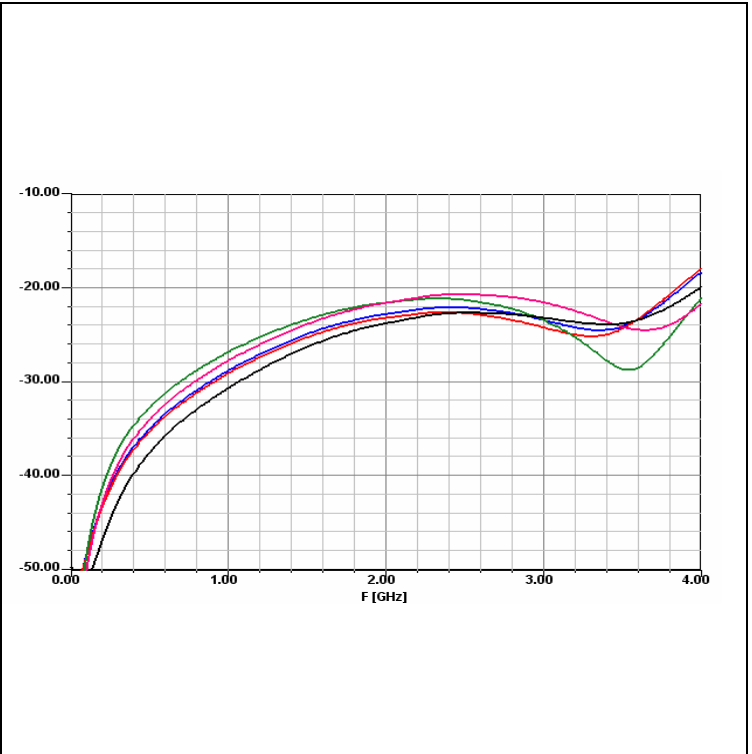
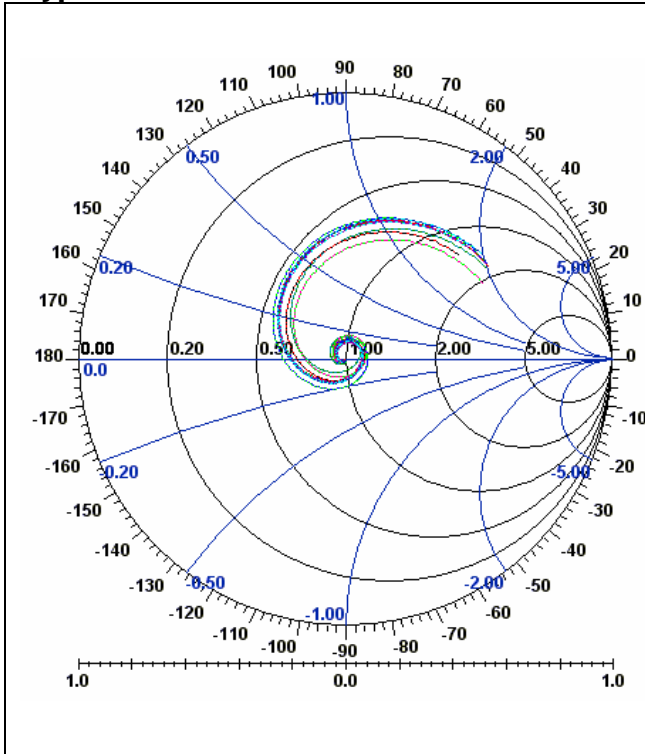
Outline Drawing



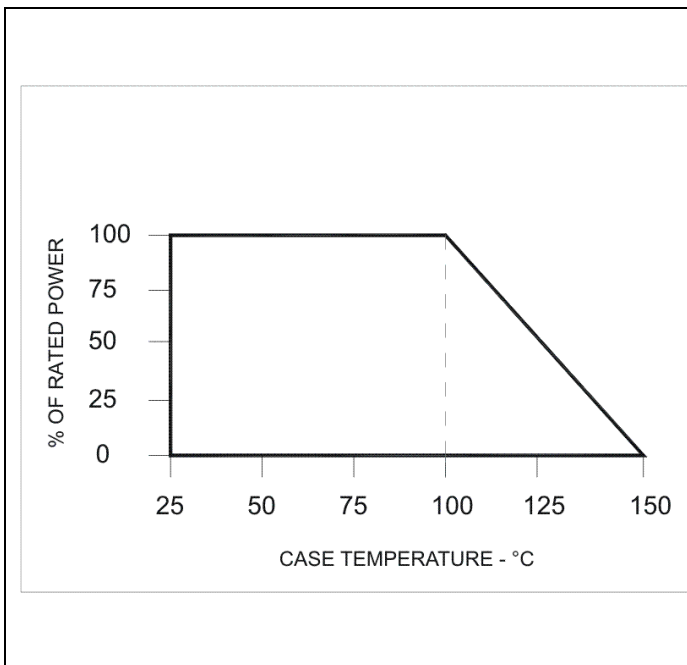
Note: All dimensions in inches – 1inch = 2.54cm. Lead Length: 0.150in min.

I100N50X4 (097) Rev D.

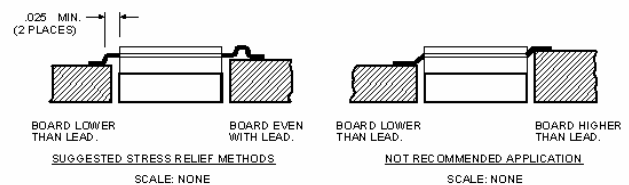
Typical Performance:



Power De-rating:



Mounting Footprint and Procedure:



SUGGESTED MOUNTING PROCEDURES:

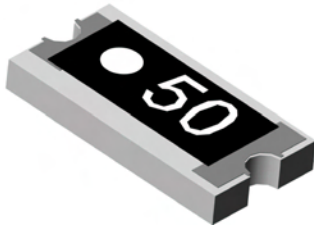
1. MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
2. DRILL & TAP THE HEATSINK FOR THE APPROPRIATE THREAD SIZE TO BE USED.
3. COAT HEATSINK WITH A MINIMUM AMOUNT OF HIGH QUALITY SILICONE GREASE (.001" MAX. THICKNESS).
4. POSITION DEVICE ON MOUNTING SURFACE & SECURE USING SOCKET HEAD SCREWS, FLAT & SPLIT WASHER. TORQUE SCREWS TO THE APPROPRIATE VALUE. MAKE SURE THAT THE DEVICE IS FLAT AGAINST THE HEATSINK (CARE SHOULD BE TAKEN TO AVOID UPWARD PRESSURE OF THE LEADS TOWARDS THE LID).
5. SOLDER LEADS IN PLACE USING LEAD FREE TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON

** FOR MORE DETAILS CONTACT FACTORY **

I100N50X4 (097) Rev D.



Surface Mount Termination 10 Watts, 50Ω



Description

The C10A50Z4 is high performance RoHS compliant Alumina (Al_2O_3) surface mount termination intended as a lower cost alternative to Aluminum Nitride (AlN) and 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 90 degree hybrid directional couplers, and for use in isolators.

General Specifications

| | |
|------------------------------|---------------------------|
| Resistive Element | Thick film |
| Substrate | Alumina Ceramic |
| Terminal Finish | Matte Tin over Nickel |
| Operating Temperature | -55 to +125°C (see 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:

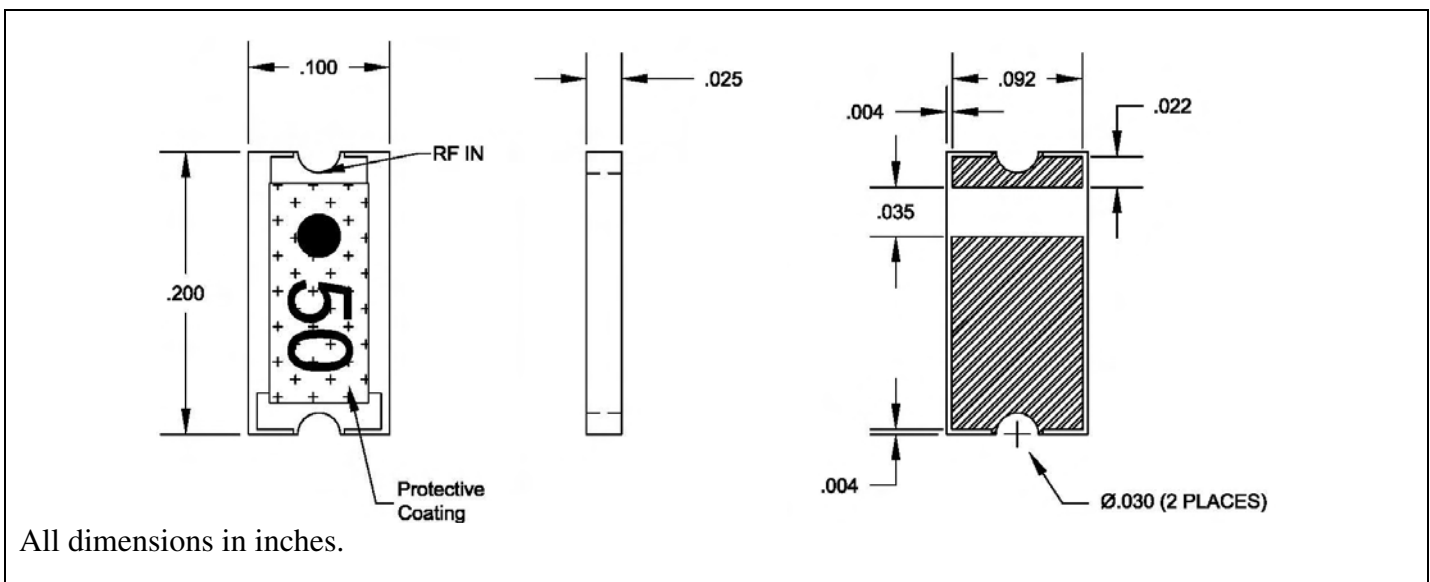
- 10 Watts
- Lowest Cost
- RoHS Compliant
- Alumina Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested

Electrical Specifications

| | |
|--------------------------|--------------------|
| Resistance Value: | 50 ohms, $\pm 2\%$ |
| Power: | 10 Watts |
| Frequency Range: | DC – 3.0 GHz |
| V.S.W.R.: | <1.25:1 |

Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. **Specifications subject to change without notice**

Outline Drawing

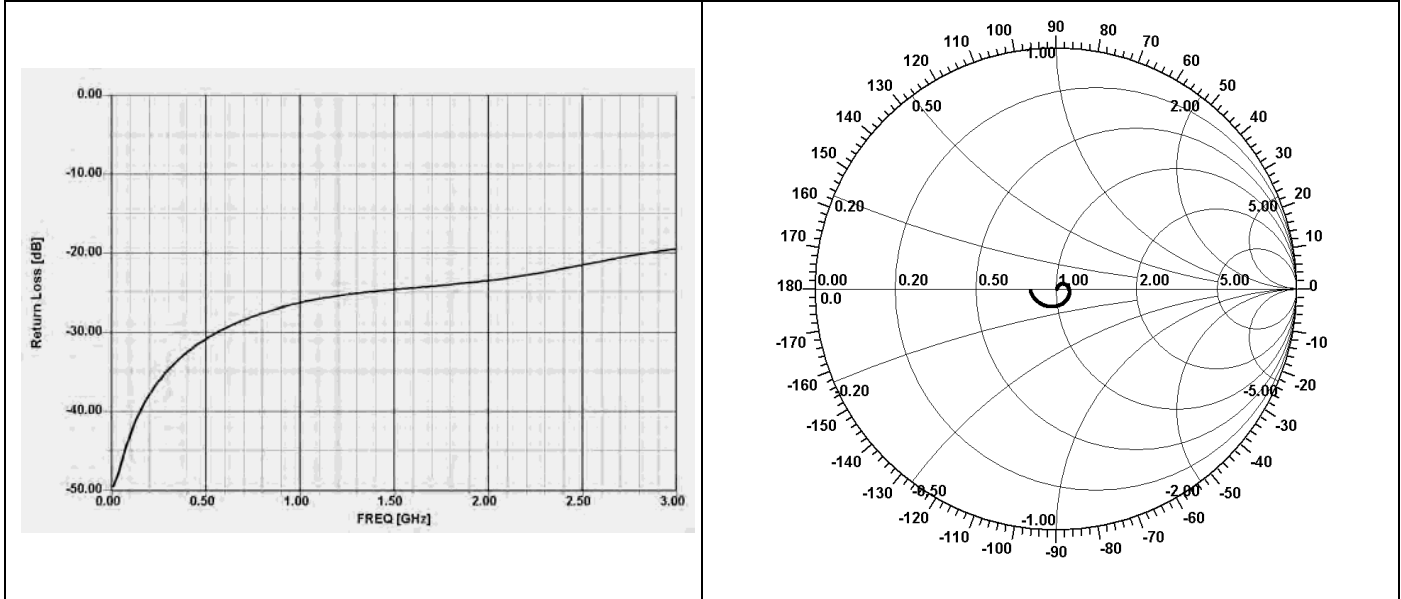


07/26/2006 Rev. B

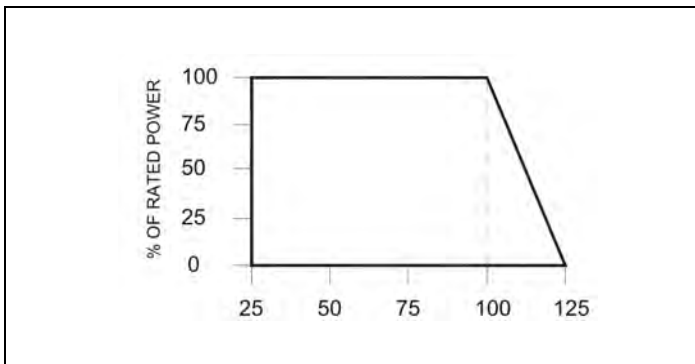




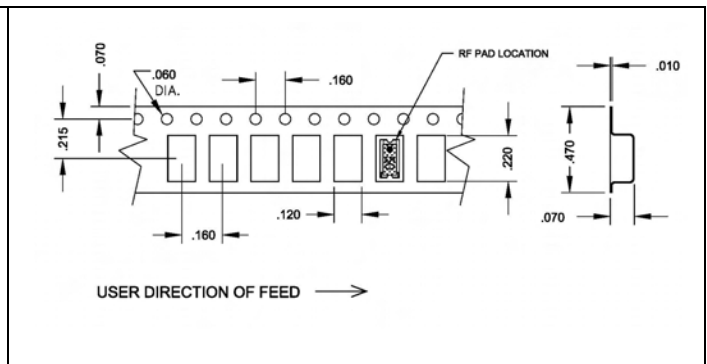
Typical Performance:



Power De-rating:



Tape & Reel:



Mounting Footprint and Procedure:

50 ohm line
0.092 [2.34]
0.025 [0.63]
0.035 [0.89]
Ø0.101 [Ø2.57]
2x 4-40 Screw Hole
Ø0.031 [Ø0.79]
0.060 [1.52]
0.250 [6.35]

Dimension given in inches [millimeters]
For best thermal performance the PCB should be soldered to the heat sink.

SOLDER PASTE
PC BOARD
HEATSINK
SOLDER FILLER VIA
SCREW (2 PLS.)

MOUNTING PROCEDURE

1. Drill thermal vias through PCB and fill with solder.
2. To ensure good thermal connectivity to heat sink, which is critical for proper operation drill and tap heatsink and mount PCB to heat sink using screws.

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Europe: +44 2392-232392

Available on Tape and Reel For Pick and Place Manufacturing.



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Surface Mount Termination 40 Watts, 50Ω



Description

The C40A50Z4 is a high performance RoHS compliant Alumina (Al₂O₃) surface mount termination intended as a lower cost alternative to Aluminum Nitride (AlN) and Beryllium Oxide (BeO). The SMD 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 90° hybrids, directional couplers, and for use in isolators.

General Specifications

| | |
|------------------------------|---------------------------|
| Resistive Element | Thick film |
| Substrate | Alumina Ceramic |
| Terminal Finish | Tin over Nickel |
| Operating Temperature | -55 to +125°C (see chart) |

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

Electrical Specifications

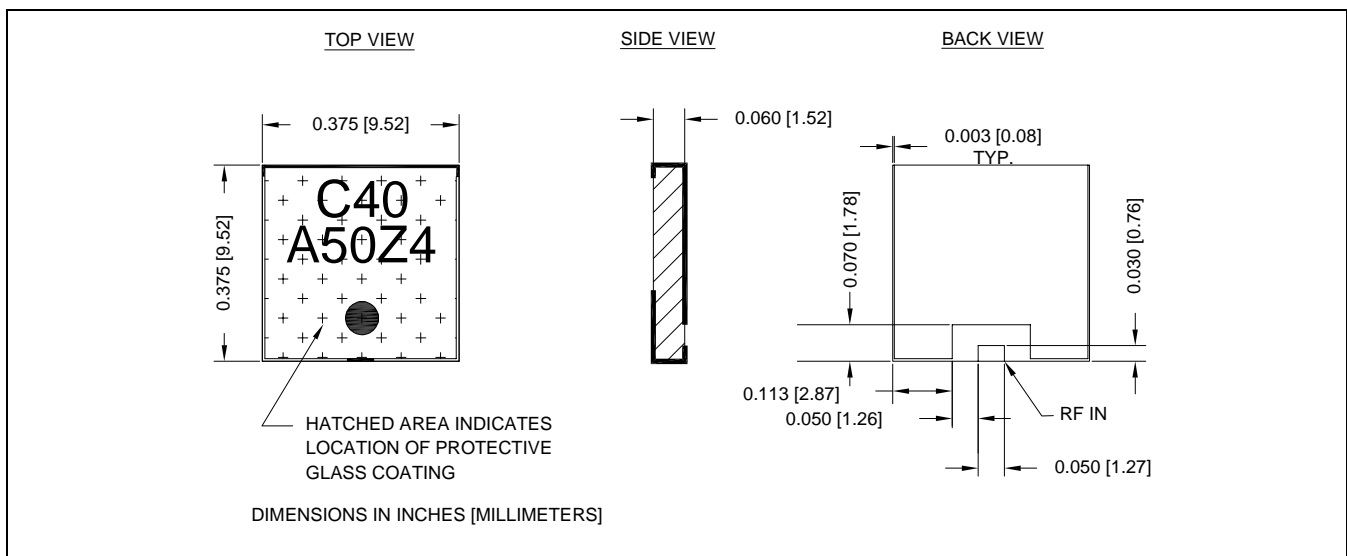
| | |
|--------------------------|---------------|
| Resistance Value: | 50 ohms, ± 2% |
| Power: | 40 Watts |
| Frequency Range: | 1KHz – 2.3GHz |
| V.S.W.R.: | <1.20:1 |

Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. **Specifications subject to change without notice**

Features:

- 40 Watts
- Lowest Cost
- RoHS Compliant
- Alumina Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested

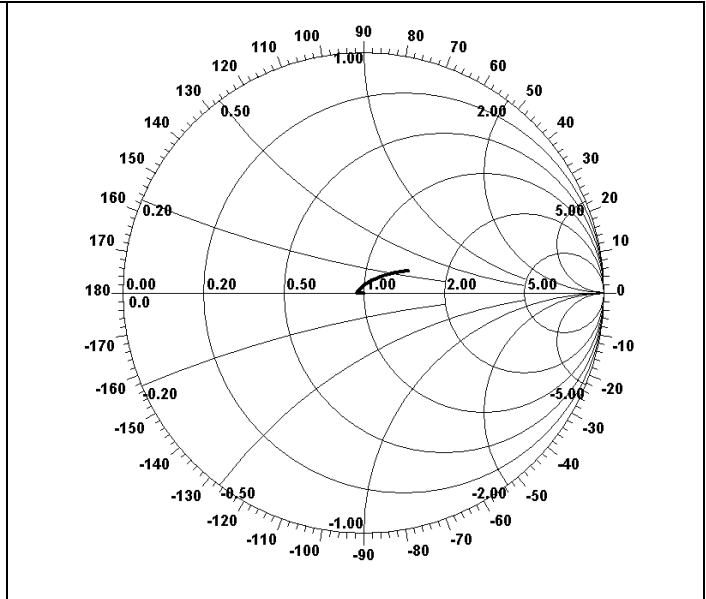
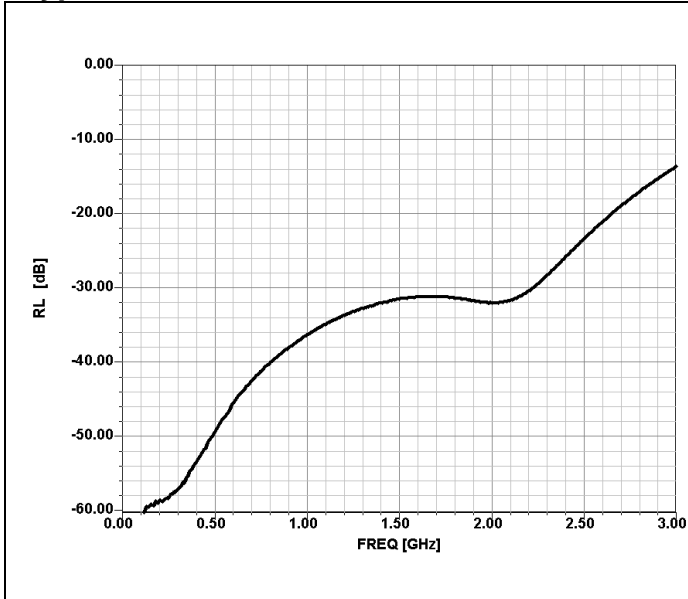
Outline Drawing



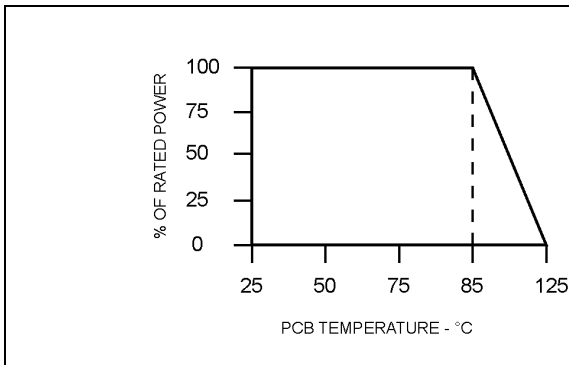
Rev. 5/13/05



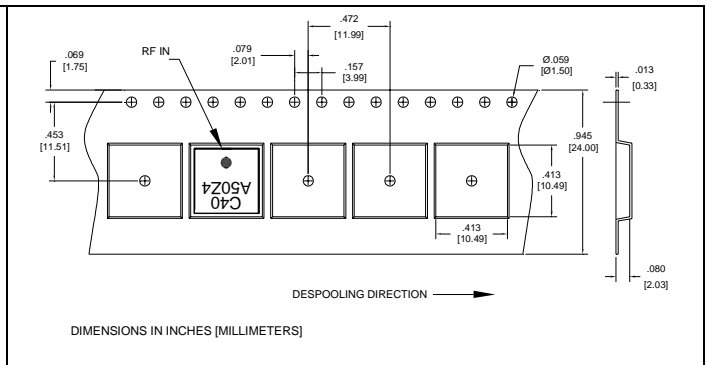
Typical Performance:



Power De-rating:



Tape & Reel:



Mounting Footprint and Procedure:

50 ohm line

0.067 [1.70]

0.255 [6.48]

0.040 [1.02]

0.040 [1.02]

0.020 [0.51]

0.450 [11.43]

0.101 [2.57] 2x 4-40 Screw Hole

SOLDER PASTE

SOLDER FILLED VIA

PC BOARD

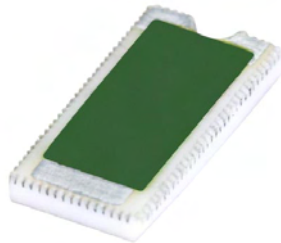
HEATSINK

SCREW (2 PLS.)

MOUNTING PROCEDURE

1. Drill thermal via through PCB and fill with solder.
2. To ensure good thermal connectivity to heat sink, which is critical for proper operation drill and tap heatsink and mount PCB to heat sink using screws.

Dimension given in inches [millimeters]
For best thermal performance the PCB should be soldered to the heat sink.



General Specifications

| | |
|-----------------------|---------------------------|
| Resistive Element | Thick film |
| Substrate | Alumina Ceramic |
| Terminal Finish | Thick film Silver |
| Operating Temperature | -55 to +125°C (see chart) |

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

Electrical Specifications

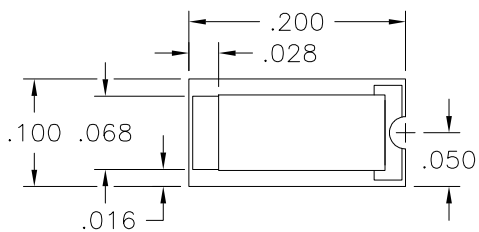
| | |
|-------------------|--------------------|
| Resistance Value: | 50 ohms, $\pm 2\%$ |
| Power: | 20 Watts |
| Frequency Range: | DC – 6.0 GHz |
| V.S.W.R.: | 1.25:1 |

Specification based on unit properly installed using suggested mounting instructions and a 50 ohm nominal impedance. **Specifications subject to change without notice**

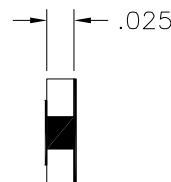
Features:

- 20 Watts
- Surface Mountable
- Alumina Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested
- RoHS Compliant

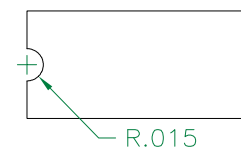
Outline Drawing



TOP VIEW



SIDE VIEW



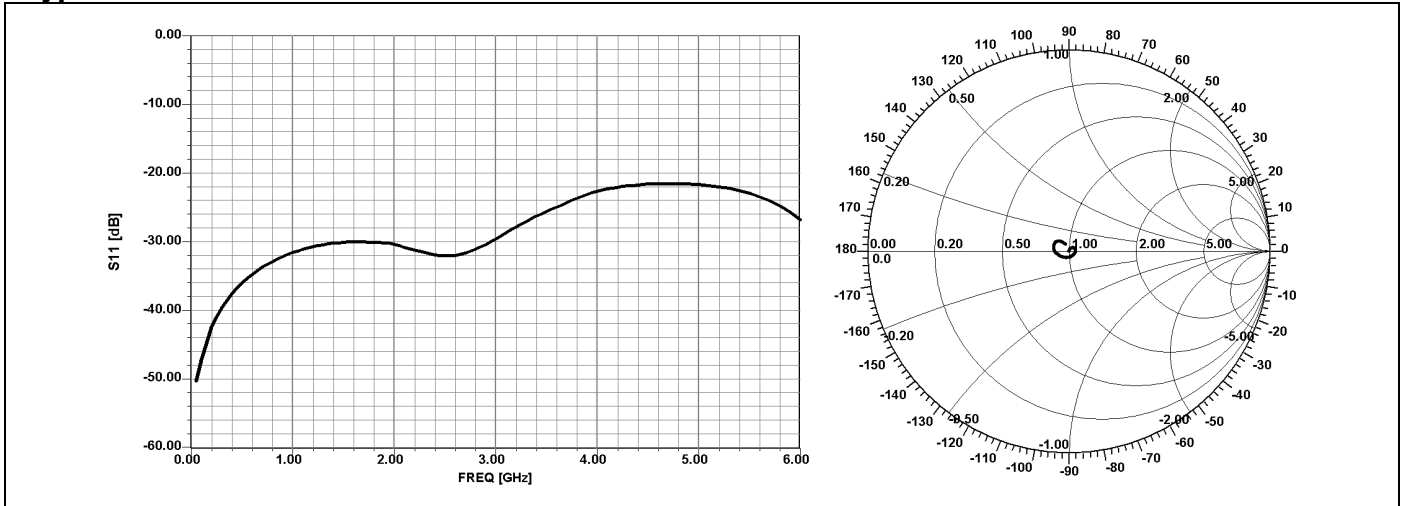
BOTTOM VIEW

A20A50X1A (097) Rev B

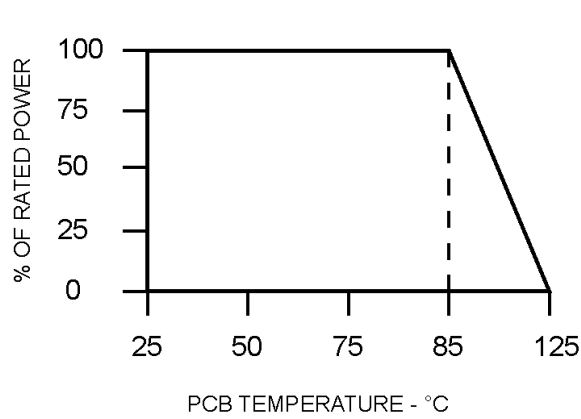




Typical Performance:



Derating:



Mounting Footprint and Procedure:

The diagram shows two cross-sectional views of the device on a PCB. The left view, labeled 'SUGGESTED STRESS RELIEF METHODS', shows the board lower than the lead and the board even with the lead. The right view, labeled 'NOT RECOMMENDED APPLICATION', shows the board lower and higher than the lead. A dimension of .025 MIN. (2 PLACES) is indicated for the lead height. Below the diagrams are the following suggested mounting procedures:

1. MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
2. POSITION DEVICE ON MOUNTING SURFACE AND SOLDER IN PLACE USING SN96 SOLDER.
3. SOLDER LEADS IN PLACE USING AN SN96 TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON (260°C).

A20A50X1A (097) Rev B

USA/Canada: (315) 432-8909
 Toll Free: (800) 544-2414
 Europe: +44 2392-232392

Available on Tape and Reel For Pick and Place Manufacturing.





Description

The G150N50W4B is high performance Aluminum Nitride (AlN) flange mount termination 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 combiners. The termination is also RoHS compliant!

General Specifications

| | |
|--------------------------|----------------------|
| Resistive Element | Thick Film |
| Substrate | AlN Ceramic |
| Cover | Alumina Ceramic |
| Mounting Flange | Nickel Plated Copper |

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

Features:

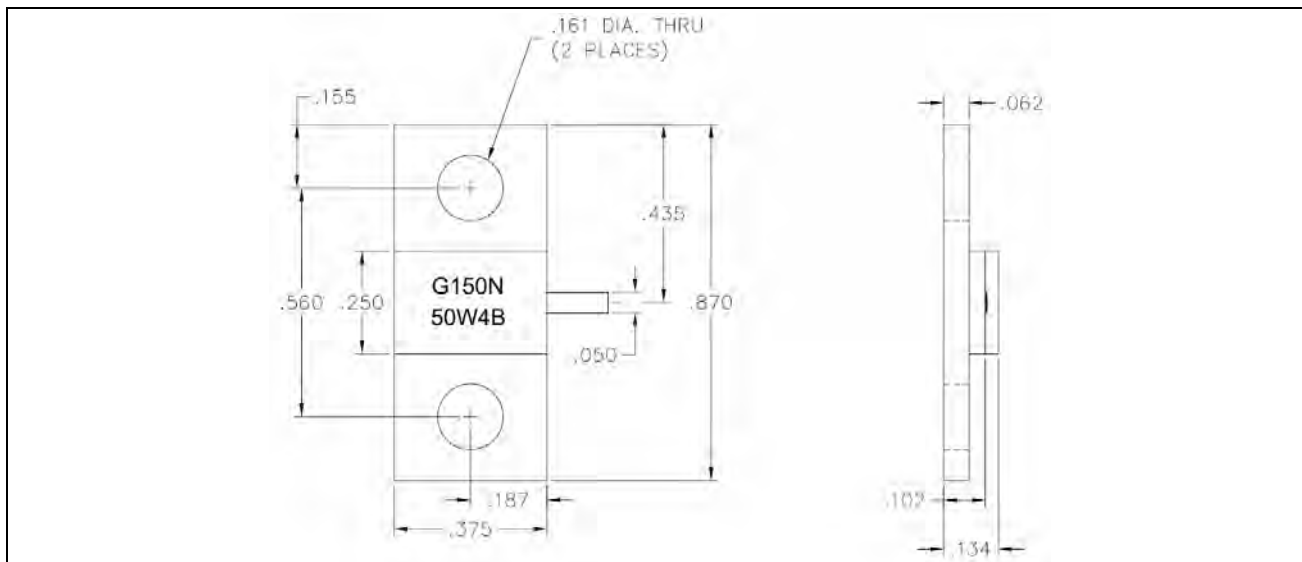
- RoHS Compliant
- 150 Watts
- DC - 2.7 GHz
- AlN Ceramic
- Non-Nichrome Resistive Element
- Low VSWR
- 100% Tested

Electrical Specifications

| | |
|--------------------------|--|
| Resistance Value: | 50 Ohms, $\pm 2\%$ |
| Power: | 150 Watts |
| Frequency Range: | DC – 2.7 GHz |
| Return Loss | > 25 dB to 2.0 GHz > 20 dB to 2.7 GHz |

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

Outline Drawing

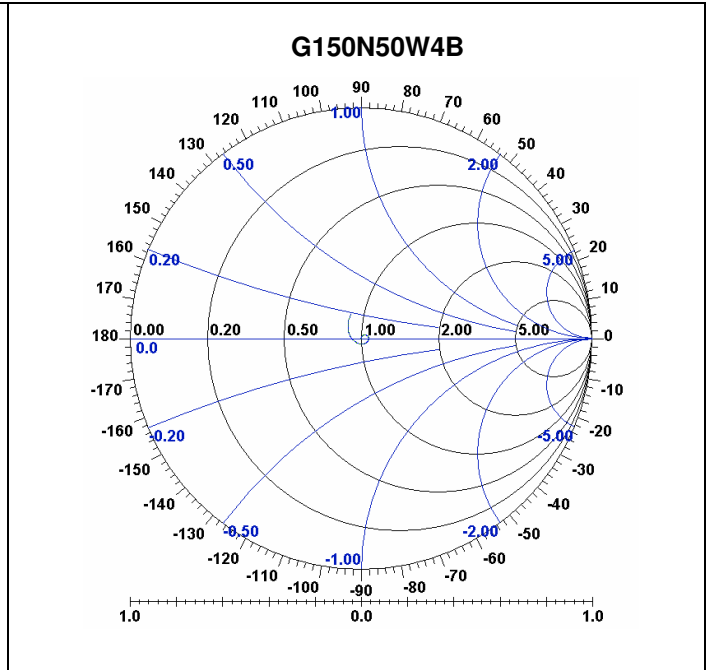
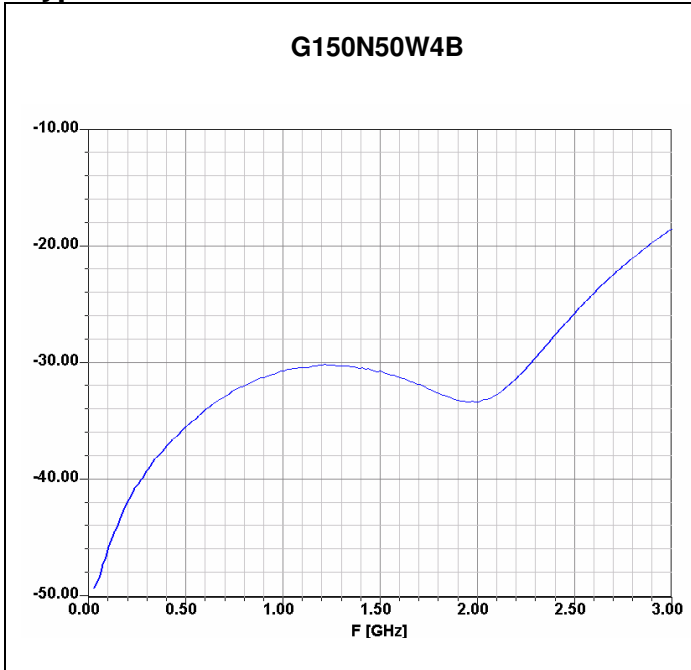


Lead Length: 0.150 Min

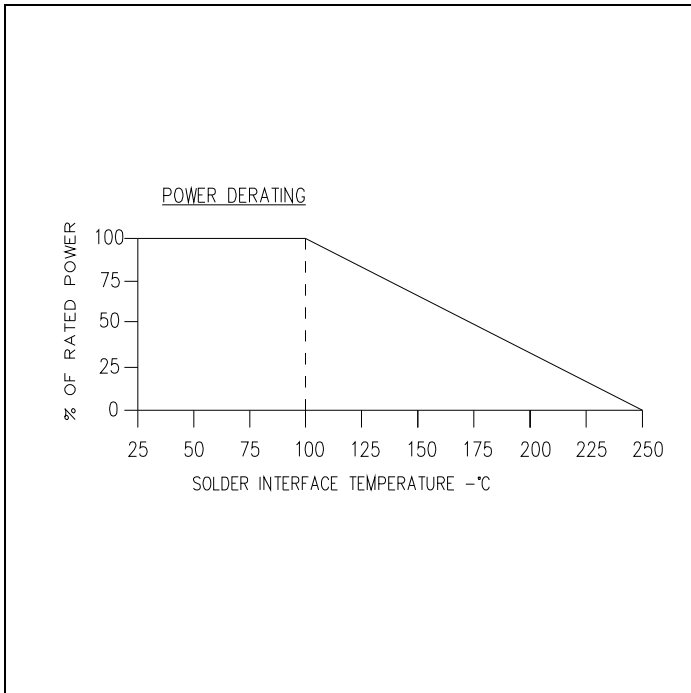
G150N50W4B (097) rev. D pg. 1 of 2



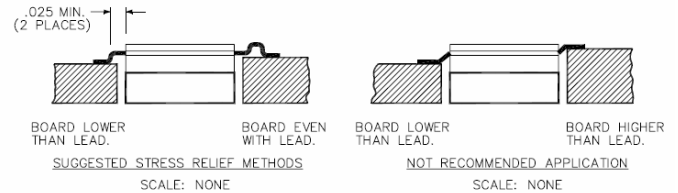
Typical Performance:



Power De-rating:



Mounting Footprint and Procedure:



SUGGESTED MOUNTING PROCEDURES:

1. MAKE SURE THAT THE DEVICES ARE MOUNTED ON FLAT SURFACES (.001" UNDER THE DEVICE) TO OPTIMIZE THE HEAT TRANSFER.
2. DRILL & TAP THE HEATSINK FOR THE APPROPRIATE THREAD SIZE TO BE USED.
3. COAT HEATSINK WITH A MINIMUM AMOUNT OF HIGH QUALITY SILICONE GREASE (.001" MAX. THICKNESS).
4. POSITION DEVICE ON MOUNTING SURFACE & SECURE USING SOCKET HEAD SCREWS, FLAT & SPLIT WASHER. TORQUE SCREWS TO THE APPROPRIATE VALUE. MAKE SURE THAT THE DEVICE IS FLAT AGAINST THE HEATSINK. (CARE SHOULD BE TAKEN TO AVOID UPWARD PRESSURE OF THE LEADS TOWARDS THE LID).
5. SOLDER LEADS IN PLACE USING LEAD FREE TYPE SOLDER WITH A CONTROLLED TEMPERATURE IRON