



COAXIAL

Termination

ANNE-50V+

50Ω DC to 50 GHz 2.4 mm-Male

THE BIG DEAL

- Ultra-Wideband, DC to 50 GHz
- Excellent Return Loss, 28 dB typ. up to 18 GHz; 20 dB typ. up to 50 GHz
- Input Power Handling up to 1W
- Mates with 1.85 mm Connector



Generic photo used for illustration purposes only

| | |
|------------|-------------|
| Model No. | ANNE-50V+ |
| Case Style | LL2539 |
| Connectors | 2.4 mm-Male |

+RoHS Compliant

The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

APPLICATIONS

- Test and Measurement Equipment
- Test Labs
- Defense and Aerospace
- 5G Applications
- Q and V band Communication Links

PRODUCT OVERVIEW

Mini-Circuits' ANNE-50V+ is an ultra-wideband 50Ω termination capable of absorbing signals up to 1W from DC to 50 GHz. It provides excellent return loss across its entire operating frequency range, effectively dissipating signal power with minimal reflections. This model has a 2.4mm-male connector, mechanically compatible with 2.4mm-female and 1.85 mm-female connectors. The unit features rugged construction for a long life of use and comes in a passivated stainless steel case measuring only 0.67"(l) x 0.31" (dia.).

KEY FEATURES

| Features | Advantages |
|--|--|
| Ultra-Wideband, DC to 50 GHz | Extremely wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use. |
| Good Return Loss: <ul style="list-style-type: none"> • 28 dB up to 18 GHz • 20 dB up to 50 GHz | Good return loss minimizes signal reflections across multiple-decade frequency range. |
| 2.44 mm connector mates with 1.85 mm connectors | Provides flexible connection options, avoiding the need for extra adapters. |
| Power Handling up to 1W | ANNE-50V+ meets a wide range of system power requirements in a small device size. |
| Wide Operating Temperature Range, -55 to +100 °C | Withstands tough operating conditions and is suitable for use near high power componentry where heat rise is common. |

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ECO-016342
ANNE-50V+
MCL NY
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ELECTRICAL SPECIFICATIONS AT 25°C

| Parameter | Condition (GHz) | Min. | Typ. | Max. | Unit |
|--------------------------|-----------------|------|------|------|------|
| Frequency Range | | DC | – | 50 | GHz |
| Impedance | | | 50 | | Ohms |
| Return Loss | DC - 18 | 23 | 28 | – | dB |
| | 18 - 35 | 17.7 | 22 | – | |
| | 35 - 50 | 14.7 | 20 | – | |
| Input Power ¹ | DC - 50 | – | – | 1 | W |

1. At 25°C, derate linearly to 300 mW at 100°C.

ABSOLUTE MAXIMUM RATINGS¹

| Parameter | Ratings |
|-----------------------|-------------------|
| Operating Temperature | -55 °C to +100 °C |
| Storage Temperature | -55 °C to +100 °C |

1. Permanent damage may occur if any of these limits are exceeded.



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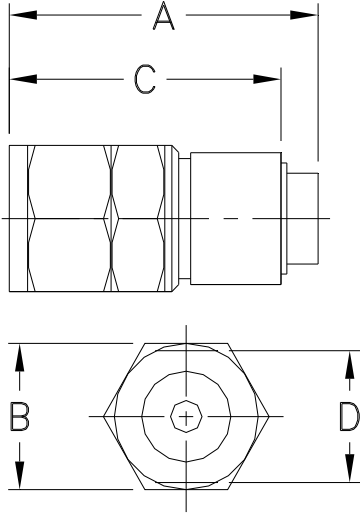
Termination

ANNE-50V+

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OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch/mm)

| A | B | C | D | E | wt |
|------|------|------|------|---|-------|
| .67 | .312 | .59 | .281 | — | grams |
| 17.0 | 7.9 | 15.0 | 7.1 | — | 4.4 |



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Termination

ANNE-50V+

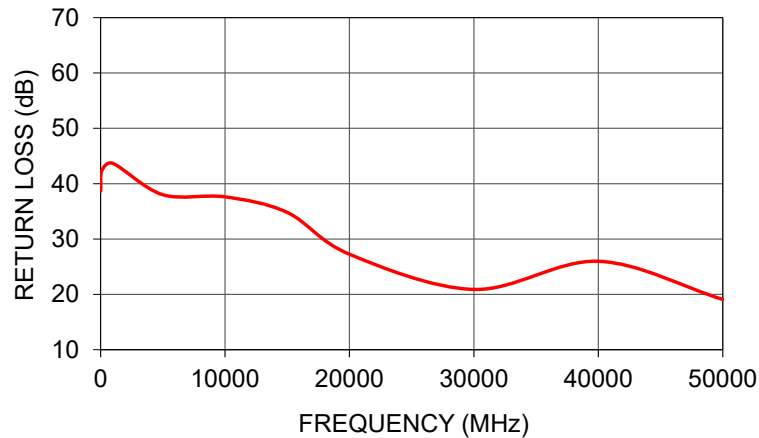
Mini-Circuits

50Ω DC to 50 GHz 2.4 mm-Male

TYPICAL PERFORMANCE DATA

| Frequency (MHz) | Return Loss (dB) |
|-----------------|------------------|
| 10 | 38.66 |
| 100 | 42.37 |
| 1000 | 43.66 |
| 5000 | 38.00 |
| 10000 | 37.62 |
| 15000 | 34.80 |
| 20000 | 27.25 |
| 30000 | 20.89 |
| 40000 | 25.98 |
| 50000 | 19.08 |

ANNE-50V+
RETURN LOSS



NOTES

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html



Typical Performance Data

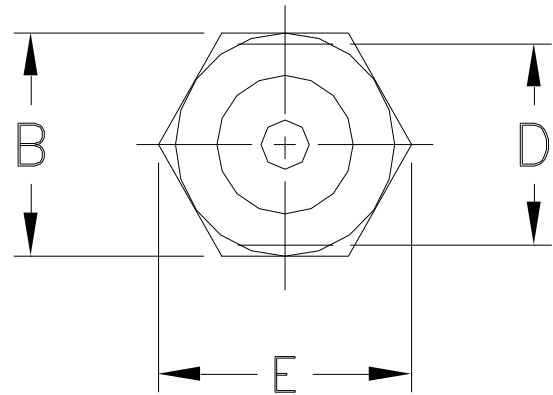
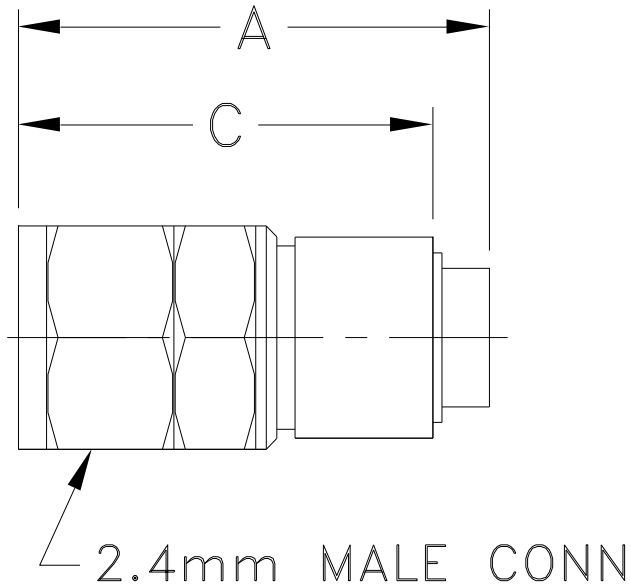
| FREQUENCY (MHz) | RETURN LOSS (dB) |
|--------------------|---------------------|
| 10 | 38.66 |
| 100 | 42.37 |
| 200 | 41.92 |
| 460 | 43.01 |
| 730 | 42.94 |
| 1000 | 43.66 |
| 2000 | 42.99 |
| 3000 | 38.98 |
| 4000 | 37.36 |
| 5000 | 38.00 |
| 6000 | 35.78 |
| 7000 | 35.73 |
| 8000 | 35.78 |
| 9000 | 35.34 |
| 10000 | 37.62 |
| 11000 | 37.82 |
| 12000 | 38.44 |
| 13000 | 37.60 |
| 14000 | 34.56 |
| 15000 | 34.80 |
| 16000 | 30.85 |
| 17000 | 30.57 |
| 18000 | 29.70 |
| 19000 | 26.97 |
| 20000 | 27.25 |
| 22000 | 24.40 |
| 24000 | 23.90 |
| 26000 | 23.40 |
| 26500 | 22.40 |
| 28000 | 21.62 |
| 30000 | 20.89 |
| 32000 | 21.11 |
| 34000 | 22.80 |
| 36000 | 23.41 |
| 38000 | 23.06 |
| 40000 | 25.98 |
| 42000 | 32.70 |
| 43000 | 31.59 |
| 43500 | 29.62 |
| 44000 | 25.66 |
| 45000 | 23.69 |
| 46000 | 22.12 |
| 47000 | 21.23 |
| 48000 | 20.44 |
| 49000 | 19.73 |
| 50000 | 19.08 |

Typical Performance Curves



Outline Dimensions

LL2539



| CASE # | A | B | C | D | E | WT. GRAM |
|--------|----------------|----------------|----------------|----------------|---------------|----------|
| LL2539 | .67 (17.02) | .312 (8.00) | .59 (14.97) | .281 (7.14) | .36 (9.14) | 4.4 |

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .030$; 3Pl. $\pm .015$

Notes:

1. Case material: Stainless Steel.
2. Case Finish: Passivated.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|----------------------------|--|--------------------------------------|
| Operating Temperature | -55° to 100°C Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C Ambient Environment | Individual Model Data Sheet |
| Barometric Pressure | 100,000 Feet | MIL-STD-202, Method 105, Condition D |
| Humidity | 90% RH, 65°C Units may require bake-out after humidity to restore full performance. | MIL-STD-202, Method 103 |
| Thermal Shock | -65° to 125°C, 5 cycles | MIL-STD-202, Method 107, Condition B |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36) | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock | 100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18) | MIL-STD-202, Method 213, Condition I |