

# Termination

### TERM-25W-183N+

 $50\Omega$  25W DC to 18 GHz N-type Male

#### **THE BIG DEAL**

- · Ultra-Wideband Operation, DC to 18 GHz
- Input Power Handling, 25W
- Excellent Return Loss, 22 dB Typ. up to 18 GHz



Generic photo used for illustration purposes only

| Model No.  | TERM-25W-183N+ |  |
|------------|----------------|--|
| Case Style | LL2798         |  |
| Connectors | N-type Male    |  |

# +RoHS Compliant The +Suffix identifies RoHS Compliance, See our website for methodologies and qualifications

### **APPLICATIONS**

- Cellular Communications
- Satellite Communications
- Test set-up
- Defense and Radar

#### **PRODUCT OVERVIEW**

Mini-Circuits' TERM-25W-183N+ is an ultra-wideband  $50\Omega$  high power termination capable of absorbing signals up to 25W from DC to 18 GHz. It provides excellent return loss across its entire operating frequency range, effectively dissipating signal power with minimal reflections. This model has N-type male connectors, allowing connections with N-type female connectors. The unit features rugged construction for a long life of use and comes in passivated stainless steel connector with black anodized aluminum housing.

### **KEY FEATURES**

| Features  | Advantages   |  |
|---|--|--|
| Wideband, DC to 18 GHz                              | Extremely wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use. |  |
| Good Return Loss: - 22 dB typ. up to 18 GHz         | Good return loss minimizes signal reflections across multiple-decade frequency range   |  |
| Power Handling up to 25W                            | Meets a wide range of system power requirements.   |  |
| Wide operating temperature range,<br>-55 to +100 °C | Withstands tough operating conditions and is suitable for use near high power componentry where heat rise is common.         |  |



# Termination

## **TERM-25W-183N+**

50Ω 25W DC to 18 GHz N-type Male

### **ELECTRICAL SPECIFICATIONS AT 25°C**

| Parameter                | Condition (GHz) | Min. | Тур. | Max. | Units |
|--------------------------|-----------------|------|------|------|-------|
| Frequency Range          | -               | DC   | -    | 18   | GHz   |
| Return Loss              | DC - 6          | 20.8 | 32   | -    |       |
|                          | 6 - 12.4        | 17.7 | 30   | -    | dB    |
|                          | 12.4 - 18       | 15.5 | 29   | -    |       |
| Input Power <sup>1</sup> | DC - 18         | -    | -    | 25   | W     |

<sup>1.</sup> At 25°C, derate linearly to 10W at 100°C.

### **ABSOLUTE MAXIMUM RATINGS<sup>2</sup>**

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

<sup>2.</sup> Permanent damage may occur if any of these limits are exceeded.



### **COAXIAL HIGH POWER**

# Termination

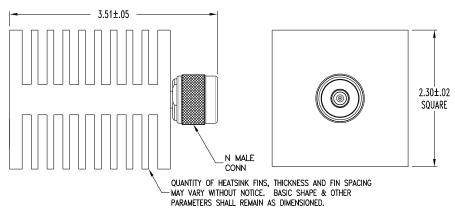
## **TERM-25W-183N+**

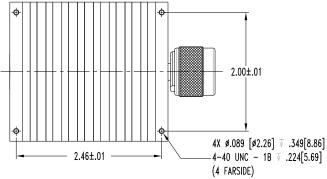
 $50\Omega$  25W DC to 18 GHz N-type Male

### **COAXIAL CONNECTIONS**

| Input | N-Male |
|-------|--------|
|-------|--------|

### **OUTLINE DRAWING**





Weight: 500 grams

Dimensions are in inches [mm]. Tolerances: 2 PL. ± .03; 3 PL ± .010



### **COAXIAL HIGH POWER**

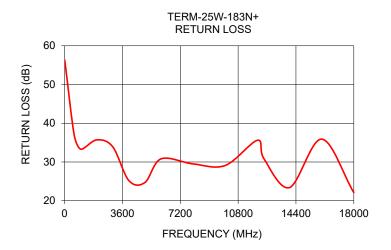
# **Termination**

### TERM-25W-183N+

 $50\Omega$  25W DC to 18 GHz N-type Male

### **TYPICAL PERFORMANCE DATA / GRAPHS**

| Frequency<br>(MHz) | Return Loss<br>(dB) |
|--------------------|---------------------|
| 10                 | 56.30               |
| 600                | 36.90               |
| 1000               | 33.30               |
| 2000               | 35.70               |
| 3000               | 33.90               |
| 4000               | 25.20               |
| 5000               | 24.70               |
| 6000               | 30.80               |
| 8000               | 29.50               |
| 10000              | 29.10               |
| 12000              | 35.60               |
| 12400              | 30.90               |
| 14000              | 23.40               |
| 16000              | 35.90               |
| 18000              | 22.10               |



#### NOTES

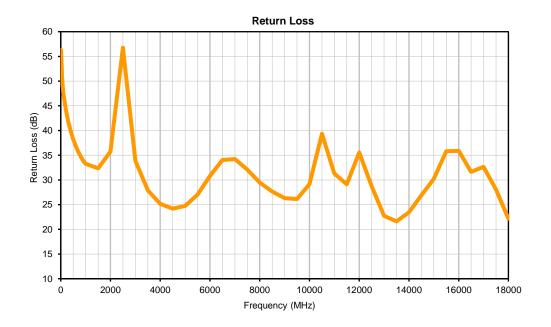
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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      | RETURN LOSS    |
|----------------|----------------|
| (MHz)          | (dB)           |
| 10             | 56.31          |
| 20             | 55.19          |
| 30             | 53.82          |
| 40             | 52.52          |
| 50             | 50.94          |
| 60             | 50.32          |
| 70             | 49.49          |
| 80             | 48.79          |
| 90             | 48.24          |
| 100            | 47.67          |
| 200            | 44.32          |
| 300            | 41.81          |
| 400            | 39.85          |
| 500            | 38.24          |
| 600            | 36.90          |
| 700            | 35.74          |
| 800            | 34.75          |
| 900            | 33.92          |
| 1000           | 33.26          |
| 1500           | 32.36          |
| 2000           | 35.72          |
| 2500           | 56.78          |
| 3000           | 33.86          |
| 3500           | 27.88          |
| 4000           | 25.15          |
| 4500           | 24.18          |
| 5000           | 24.74          |
| 5500           | 26.99          |
| 6000           | 30.78          |
| 6500           | 34.02          |
| 7000           | 34.24          |
| 7500           | 32.08          |
| 8000           | 29.47          |
| 8500           | 27.67          |
| 9000<br>9500   | 26.32<br>26.13 |
|                | 29.15          |
| 10000<br>10500 | 39.34          |
|                | 31.33          |
| 11000<br>11500 | 29.12          |
|                |                |
| 12000<br>12500 | 35.56          |
| 13000          | 28.71<br>22.74 |
| 13500          | 21.61          |
| 14000          | 23.45          |
| 14500          | 26.87          |
| 15000          | 30.22          |
| 15500          | 35.81          |
| 16000          | 35.89          |
| 16500          | 31.65          |
| 17000          | 32.63          |
| 17500          | 28.05          |
| 18000          | 22.15          |

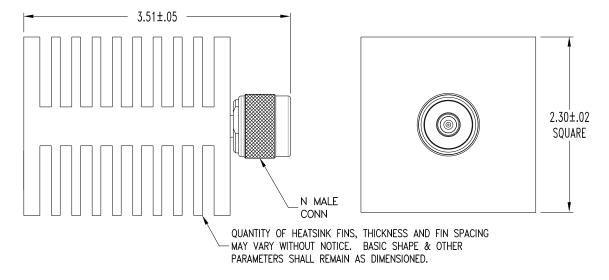
Typical Performance Curves

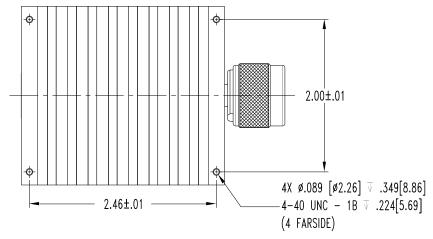




### **Outline Dimensions**

**LL2798** 





Weight: 500 grams

Dimensions are in inches (mm). Tolerances: 2Pl.  $\pm$  .03; 3Pl.  $\pm$  .010

**Notes:** 

Case Material: Aluminum alloy. Case Finish: Black anodize.

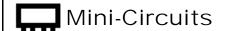




P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com



**ENV106** 



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 or -55° to 85° C<br>Ambient Environment | Individual Model Data Sheet                                      |
| Storage Temperature   | -55° to 100° C<br>Ambient Environment                  | Individual Model Data Sheet                                      |
| Thermal Shock         | -55° to 100°C, 5 cycles                                | MIL-STD-202, Method 107, conditionB-3,except over - 55° to 100°C |
| Connector Durability  | 500 mating/unmating cycles                             | MIL-PRF-39012E, PARAGRAPH 4.6.12                                 |

ENV106 Rev: OR

03/12/19

M173139 File: ENV106.pdf

This document and its contents are the property of Mini-Circuits.