COAXIAL

Termination

TERM-250W-83N+

250W DC to 8000 MHz N-Male

THE BIG DEAL

- Wideband Operation, DC to 8000 MHz
- High Power Handling, 250W
- Excellent VSWR, 1.09 Typ.

Generic photo used for illustration purposes only

APPLICATIONS

- Test and Measurement Equipment
- LTE & 5G MIMO Infrastructure
- Satellite Communications
- Radar, EW, and ECM Defense Systems

Model No.	TERM-250W-83N+
Case Style	GH3249-1
Connectors	N-Male

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

PRODUCT OVERVIEW

Mini-Circuits' TERM-250W-83N+ is a coaxial termination providing high power handling of up to 250W over the DC to 8 GHz frequency range. This model supports many of high-power applications over a broad frequency range including high-power measurement, instrumentation, and more with excellent return loss. It provides excellent VSWR (1.09 typ.) and excellent thermal stability from -55 to 125 ˚C. It features rugged construction with N-male connector and heat dissipation fins for efficient cooling.

KEY FEATURES

Features	Advantages
Wideband Operation, DC to 8000 MHz	Wide frequency range makes the TERM-250W-83N+ suitable for a wide variety of applications.
High power handling to 250W	Supports high-power test lab and system applications by protecting sensitive test equipment that is often damaged when exposed to high RF input power.
Excellent VSWR, 1.09:1 typ.	Well-matched for 50Ω systems; reduces effects of phase variation
Rugged construction	Excellent durability for a long lifetime of use
Wide operating temperature range, -55 to 125 ˚C	Designed with heat dissipation fins for efficient cooling, the TERM-250W-83N+ provides reliable performance over extreme operating conditions. Note: See max power derating at high temperature.

REV. OR
ECO-016158
TERM-250W-83N+
MCL NY
230105

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range	-	DC	-	8000	MHz
VSWR	DC-2000	-	1.04	-	:1
	2000-4000	-	1.09	-	
	4000-6000	-	1.12	-	
	6000-8000	-	1.09	-	
Input Power (N-Male)[1]	DC-8000	-	-	250	W

1. Max. input power at 25°C ambient, derate to 25W at 125°C.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-55 °C to +125 °C
Storage Temperature	-55 °C to +125 °C
Input Power (N-Male)	250 Watt
Input Peak Power[2]	1000 Watt

1. Permanent damage may occur if any of these limits are exceeded.
2. Peak power <5 µSEC. PW, /<0.1% duty cycle.

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COAXIAL CONNECTIONS

Input	N-Male

CONNECTOR SPECIFICATIONS

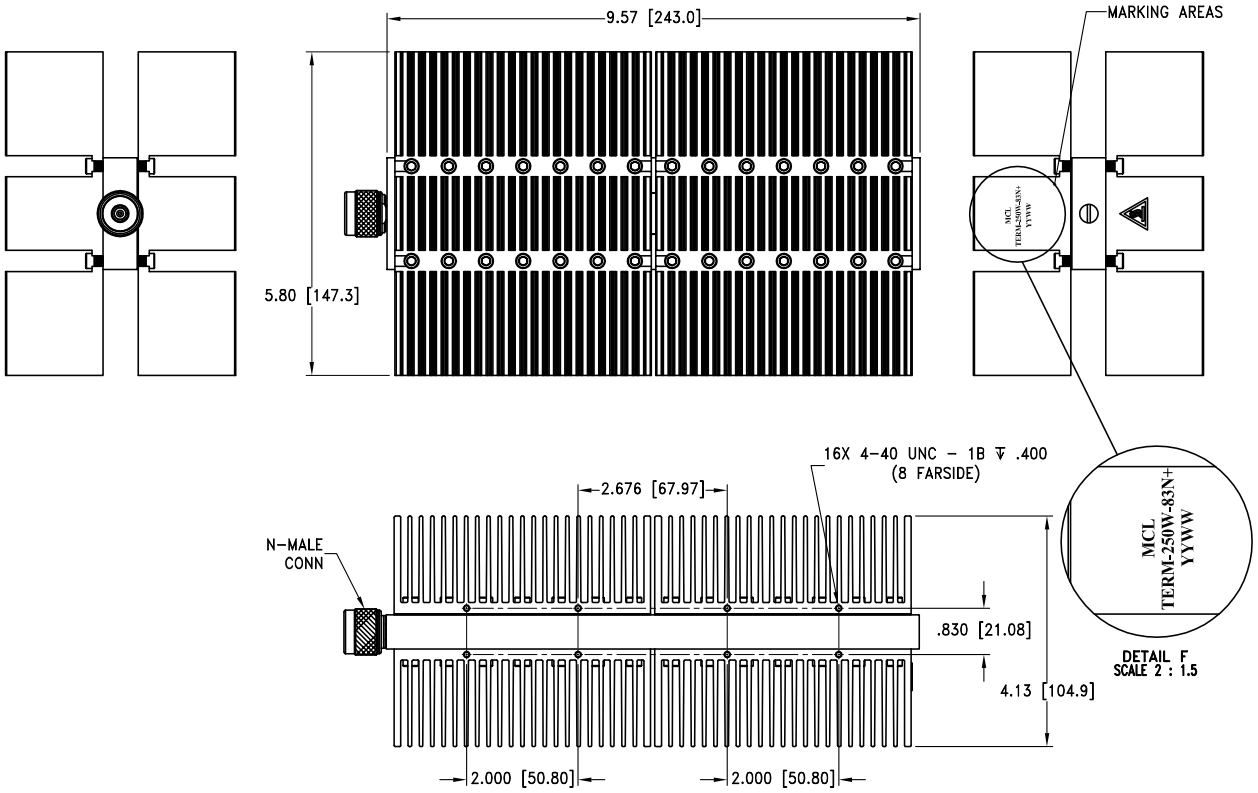
Description	Connector
Type	N-Male
Orientation	Straight
Mounting Type	Standard
Impedance	50 Ω
Coupling Nut	Stainless Steel, Silver Plated
Center Contact	BeCu, Silver Plated

MECHANICAL SPECIFICATIONS

Housing	Aluminum Alloy, Chemical Conversion Coat
Heat Sinks	Aluminum Alloy, Black Anodize Finish (0.5°C/Watt)[1]
Internal Resistive Elements	Beryllium Oxide Or Aluminum Nitride Ceramic With Thick Film And/Or Thin Film Resistor

1. Heat sink thermal rise (calculated)

OUTLINE DRAWING



Weight (MAX.): 3820 grams

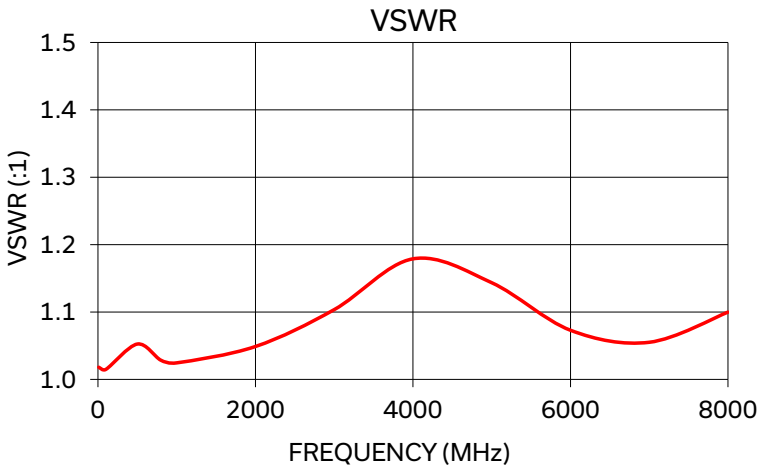
Dimensions are in inches (mm). Tolerances: 2 Pl.±.05[1.27]; 3 PL ±.030[.77]

Termination

TERM-250W-83N+

250W DC to 8000 MHz N-Male

TYPICAL PERFORMANCE CURVE



NOTES

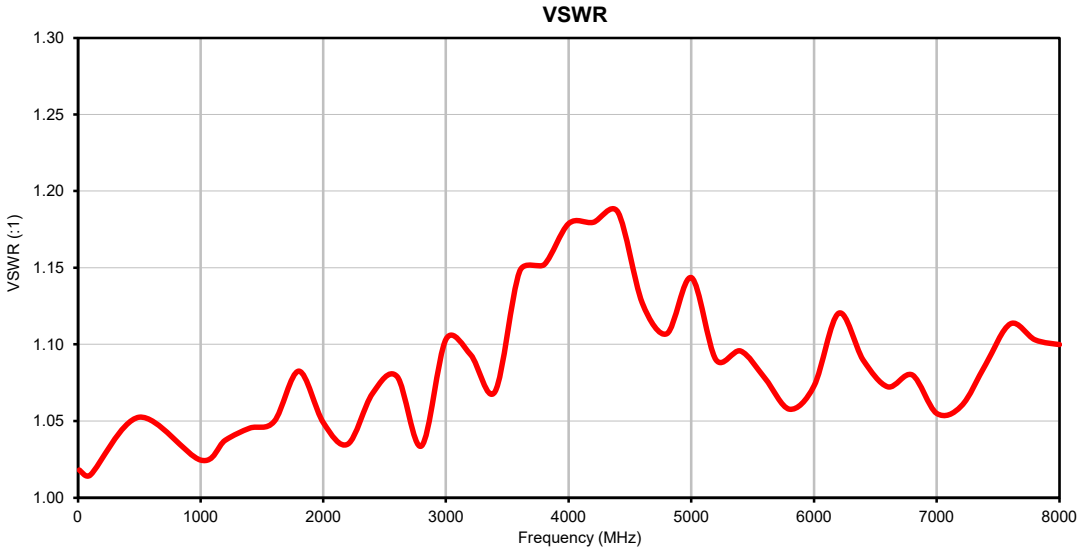
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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

Termination TERM-250W-83N+

Typical Performance Data

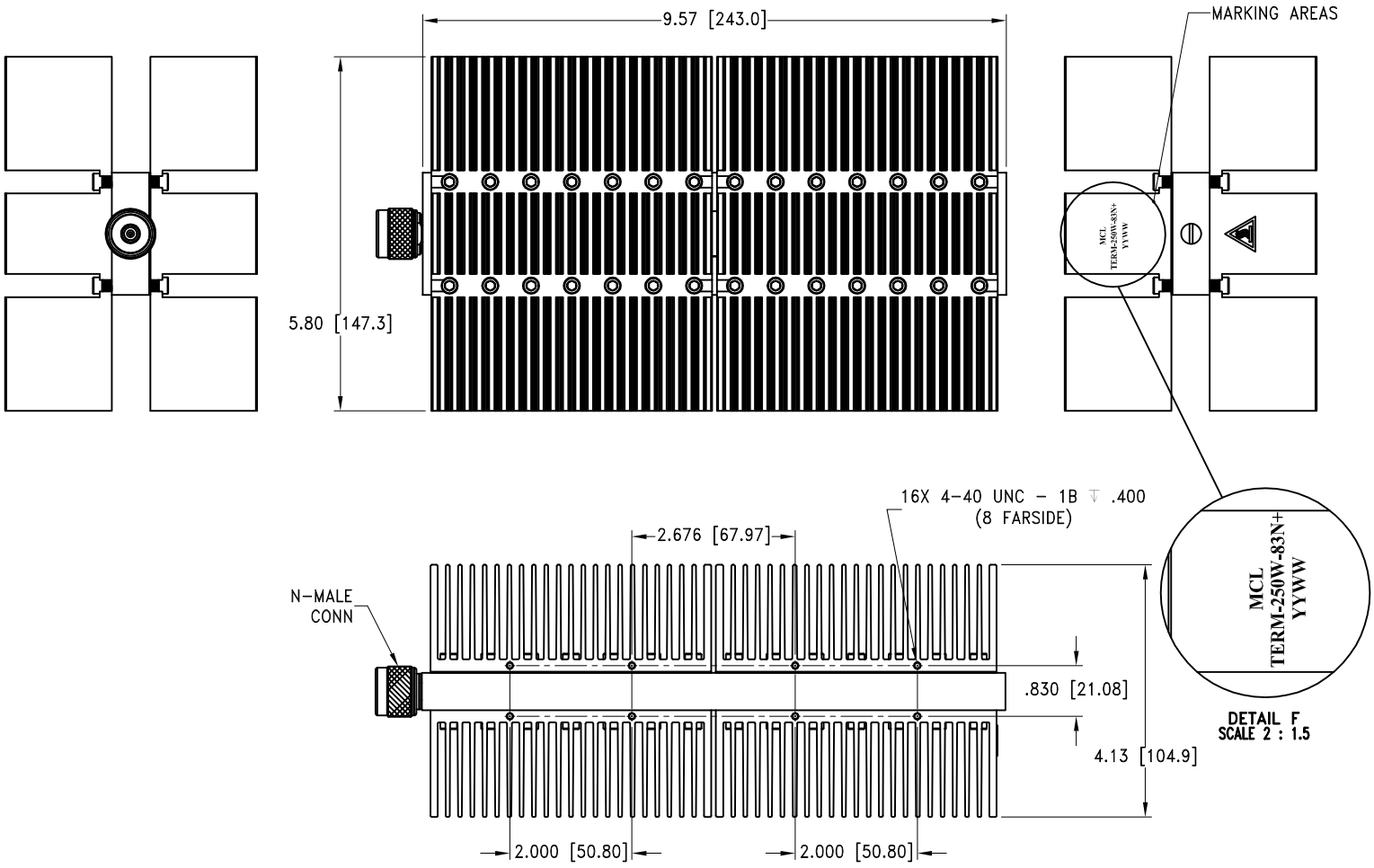
FREQUENCY (MHz)	VSWR (:1)
10	1.02
100	1.01
500	1.05
1000	1.02
1200	1.04
1400	1.05
1600	1.05
1800	1.08
2000	1.05
2200	1.03
2400	1.07
2600	1.08
2800	1.03
3000	1.10
3200	1.09
3400	1.07
3600	1.15
3800	1.15
4000	1.18
4200	1.18
4400	1.19
4600	1.13
4800	1.11
5000	1.14
5200	1.09
5400	1.10
5600	1.08
5800	1.06
6000	1.07
6200	1.12
6400	1.09
6600	1.07
6800	1.08
7000	1.06
7200	1.06
7400	1.09
7600	1.11
7800	1.10
8000	1.10

Typical Performance Curves



Case Style GH

Outline Dimensions GH3249-1



Weight (MAX.): 3820 grams

Dimensions are in inches (mm). Tolerances: 2 Pl.±.05[1.27]; 3 Pl. ±.030[.77]

Notes:

1. Case material: Aluminum alloy
2. Case Finish: Chemical conversion coat
3. Heat sinks material: Aluminum alloy
4. Heat sinks Finish: Black anodize

Mini-Circuits®

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Mini-Circuits

Environmental Specifications ENV28T20

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 125° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 125° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 125°C, 5 cycles	MIL-STD-202, Method 107
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
Connector Durability	500 mating/unmating cycles	MIL-PRF-39012E, PARAGRAPH 4.6.12