

Coaxial

N-Type Fixed Attenuator

BW-20N100W+

50Ω 100W 20dB DC to 6000 MHz

The Big Deal

- Wideband operation, DC to 6 GHz
- High power handling, 100W
- Good flatness, ± 0.65 dB typ.



CASE STYLE: GH986

Product Overview

Mini-Circuits' BW-20N100W+ is a 20 dB coaxial precision fixed attenuator providing high power handling of up to 100W over the DC to 6 GHz frequency range. This model supports many of high-power applications requiring precise attenuation over a broad frequency range including high-power measurement, matching, instrumentation, and more. It provides good VSWR (1.25 typ.), outstanding attenuation flatness (± 0.65 dB) and excellent thermal stability from -55 to 100°C . It features rugged construction with N-male to N-female connectors and heat dissipation fins for efficient cooling.

Key Features

| Feature | Advantages |
|---|---|
| Wideband operation, DC to 6 GHz | Wide frequency range makes the BW-20N100W+ suitable for a wide variety of applications. |
| High power handling to 100W | Supports high-power test lab and system applications including high-power measurement, matching, instrumentation, and more. |
| Good VSWR, 1.25:1 typ. | Well-matched for 50Ω systems; reduces effects of phase variation. |
| Good flatness, ± 0.65 dB | Provides consistent attenuation performance across the entire frequency band. |
| Rugged construction | Excellent durability for a long lifetime of use. |
| Excellent thermal stability, -55 to 100°C | Designed with heat dissipation fins for efficient cooling, the BW-20N100W+ provides reliable performance without the need for external cooling equipment. |
| Compact size (3.46 x 3.46 x 6.36") | Outstanding performance capability and power handling with minimal space requirements. |

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/MCLStore/terms.jsp



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BW-20N100W+



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| Connectors | Model |
|--------------|-------------|
| N-Male-N-Fem | BW-20N100W+ |

+RoHS Compliant

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

Maximum Ratings

Operating Temperature -55°C to 100°C

Storage Temperature -55°C to 125°C

Peak Power* 1K Watt

* 5μ second pulse 0.05% duty cycle.

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

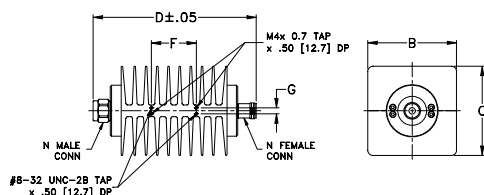
Features

- wideband, DC to 6000 MHz
- excellent VSWR, 1.25:1
- N-Male and N-Female connectors

Applications

- matching
- instrumentation
- test set-ups

Outline Drawing



Outline Dimensions (inch/mm)

| B | C | D | E | F | G | wt. |
|-------|-------|--------|----|-------|------|--------|
| 3.46 | 3.46 | 6.36 | -- | 1.75 | .23 | grams |
| 87.88 | 87.88 | 161.54 | -- | 44.45 | 5.84 | 1100.0 |

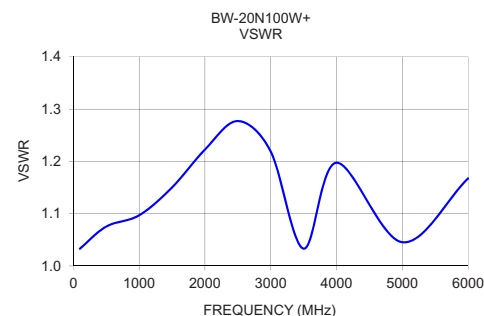
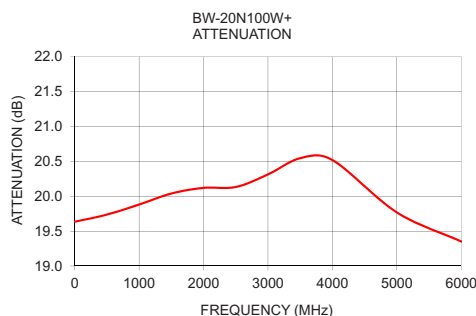
Electrical Specifications at 25°C

| Parameter | Condition (MHz) | Min. | Typ. | Max. | Unit |
|---------------------------------|-----------------|------|------|------|------|
| Frequency Range | | DC | — | 6000 | MHz |
| Attenuation | DC - 6000 | 18.5 | 20 | 21.5 | dB |
| VSWR | DC - 2500 | — | 1.15 | 1.35 | :1 |
| | 2500 - 6000 | — | 1.30 | 1.45 | |
| Input Power (Male) ¹ | DC - 6000 | — | — | 100 | W |
| Input Power (Female) | DC - 6000 | — | — | 20 | W |

1. Derate linearly to 20 Watt at 100°C.

Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 0.3 | 19.57 | 1.03 |
| 500.0 | 19.74 | 1.08 |
| 1000.0 | 19.88 | 1.10 |
| 1500.0 | 20.04 | 1.15 |
| 2000.0 | 20.12 | 1.22 |
| 2500.0 | 20.13 | 1.28 |
| 3000.0 | 20.31 | 1.22 |
| 3500.0 | 20.55 | 1.03 |
| 4000.0 | 20.52 | 1.20 |
| 5000.0 | 19.77 | 1.05 |
| 6000.0 | 19.35 | 1.17 |



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