

50Ω 1W 3, 6, 10, and 20 dB DC to 65 GHz

The Big Deal

- Extremely wideband, DC to 65 GHz
- 1.85mm Female to 1.85mm Male connectors
- Good VSWR, 1.2 @ 26.5 GHz, 1.3 @ 65 GHz typ.
- Outstanding accuracy, ± 1.5 dB over full range



CASE STYLE: DJ2591

Product Overview

The BW-Ex-1W653+ series of precision fixed attenuators achieves extremely wide frequency range from DC up to 65 GHz. Available in a variety of attenuation values for different requirements, these units support a broad range of system and test applications. Excellent attenuation flatness, good VSWR (1.2:1 typ.) and rugged construction make these models ideal solutions for applications requiring precise attenuation across very wide frequency range.

Key Features

| Feature | Advantages |
|---|--|
| Extremely wideband, DC to 65 GHz | Ideal for an exceptionally wide variety of lab and system applications up to millimeter wave bands. |
| Excellent attenuation accuracy, ± 1.5 dB or better across full range | Provides precise, consistent attenuation across the entire frequency band, ideal for broadband and multi-band usage. |
| Good VSWR <ul style="list-style-type: none">• 1.2 dB @ 26.5 GHz typ.• 1.3 dB @ 65 GHz typ. | Efficient power utilization with minimal signal power reflected back to source. |
| 1W power handling | Provides precise attenuation for a range of input power levels. |
| Passivated stainless steel connectors | Rugged construction withstands harsh environmental conditions for high reliability and long life of use. |

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

Precision Fixed Attenuator

BW-E10-1W653+

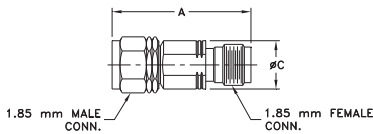
50Ω 1W 10dB DC to 65 GHz

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |

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

Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | wt |
|------|------|-------|-------|------|-------|
| 0.88 | 0.31 | 0.310 | 0.284 | .36 | grams |
| 22.2 | 8.0 | 7.90 | 7.21 | 9.14 | 5.6 |

Features

- DC to 65 GHz
- precise attenuation
- excellent VSWR, 1.20 typ.
- passivated stainless steel connectors

Applications

- matching
- instrumentation
- test set-ups



Generic photo used for illustration purposes only

CASE STYLE: DJ2591

Connectors Model
1.85mm-Female - 1.85mm Male BW-E10-1W653+

+RoHS Compliant

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

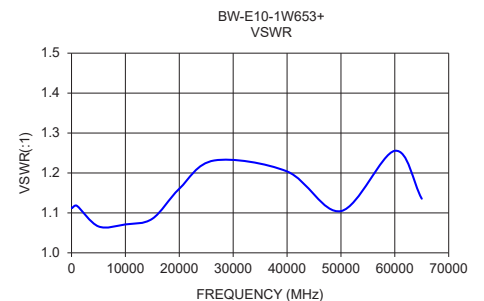
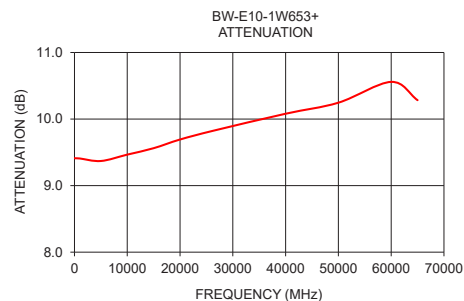
Electrical Specifications at 25°C

| Parameter | Condition (GHz) | Min. | Typ. | Max. | Unit |
|--------------------------------|-----------------|------|------|-------|------|
| Frequency Range | | DC | — | 65 | GHz |
| Attenuation | DC - 26.5 | 9.25 | 10.0 | 10.75 | dB |
| | 26.5 - 40 | — | 10.2 | 11.25 | |
| | 40 - 60 | — | 10.4 | 11.5 | |
| | 60 - 65 | — | 10.5 | 11.75 | |
| VSWR | DC - 26.5 | — | 1.1 | 1.35 | :1 |
| | 26.5 - 50 | — | 1.2 | 1.55 | |
| | 50 - 65 | — | 1.3 | 1.65 | |
| Input Power¹ | DC - 65 | — | — | 1 | W |

1. Max. power at 25°C ambient, derate linearly to 0.1W at 100°C.

Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 10 | 9.41 | 1.11 |
| 100 | 9.41 | 1.11 |
| 1000 | 9.41 | 1.12 |
| 5000 | 9.37 | 1.07 |
| 10000 | 9.47 | 1.07 |
| 15000 | 9.56 | 1.09 |
| 20000 | 9.69 | 1.16 |
| 26500 | 9.83 | 1.23 |
| 40000 | 10.08 | 1.20 |
| 50000 | 10.25 | 1.10 |
| 60000 | 10.56 | 1.26 |
| 65000 | 10.28 | 1.14 |



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