

# Precision Fixed Attenuator

50Ω    20W    20dB    DC to 18 GHz

## BW-S20W20+

### Maximum Ratings

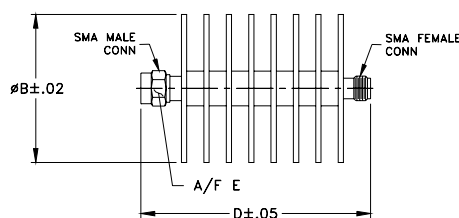
Operating Temperature -55°C to 100°C\*\*

Storage Temperature -55°C to 100°C

\*\*85°C with output into open or short.

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

### Outline Drawing



### Outline Dimensions (inch)

|  | A  | B     | C  | D     | E    | wt    |
|--|----|-------|----|-------|------|-------|
|  | -- | 1.50  | -- | 2.33  | .312 | grams |
|  | -- | 38.10 | -- | 59.18 | 7.92 | 49.2  |

### Features

- DC to 18 GHz
- precise attenuation
- excellent VSWR, 1.30:1 typ
- stainless steel SMA male and female connectors

### Applications

- matching
- instrumentation
- test set-ups
- high power measurements



Generic photo used for illustration purposes only

CASE STYLE: DC1660

Connectors      Model  
**SMA-F SMA-M**      BW-S20W20+

### +RoHS Compliant

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

### Electrical Specifications at 25°C

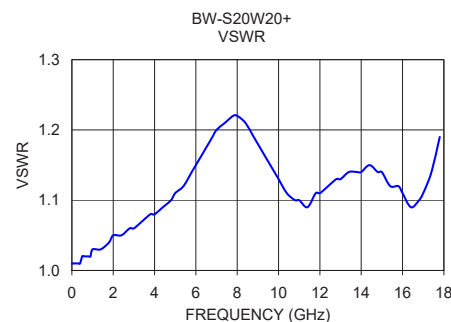
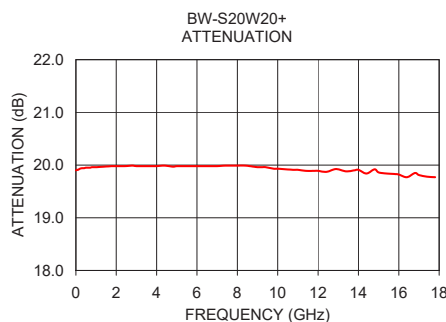
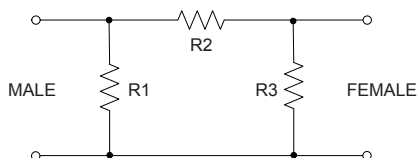
| Parameter                | Condition (GHz) | Min.  | Typ. | Max.  | Unit |
|--------------------------|-----------------|-------|------|-------|------|
| Frequency Range          |                 | DC    | —    | 18    | GHz  |
| Attenuation              | DC - 18         | —     | 20   | —     | dB   |
|                          | DC - 12.4       | 19.25 | —    | 20.75 |      |
|                          | 12.4 - 18       | 19.0  | —    | 21.0  |      |
| VSWR                     | DC - 6          | —     | —    | 1.3   | :1   |
|                          | 6 - 12.4        | —     | —    | 1.3   |      |
|                          | 12.4 - 18       | —     | —    | 1.40  |      |
| Input Power <sup>1</sup> |                 | —     | —    | 20    | W    |

1. Max. power at 25°C ambient, derate linearly to 4W at 100°C. Peak power 500W max. 5μsec. pulse width, 100Hz PRF.

### Typical Performance Data

| Frequency (GHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 0.01            | 19.90            | 1.01      |
| 2.0             | 19.98            | 1.05      |
| 4.0             | 19.98            | 1.08      |
| 6.0             | 19.98            | 1.15      |
| 8.0             | 19.99            | 1.22      |
| 10.0            | 19.93            | 1.13      |
| 12.4            | 19.87            | 1.12      |
| 14.0            | 19.91            | 1.14      |
| 16.0            | 19.82            | 1.11      |
| 18.0            | 19.78            | 1.23      |

### Electrical Schematic



### 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.

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