

# Precision Fixed Attenuator

## BW-S12W2+

50Ω    2W    12dB    DC to 18000 MHz

### Maximum Ratings

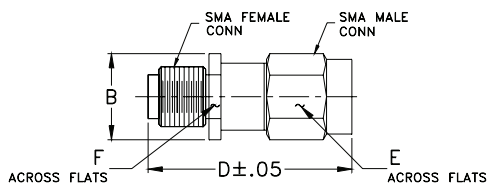
Operating Temperature -55°C to 100°C

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

\*\*With mated connectors. Unmated, 85°C max.

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

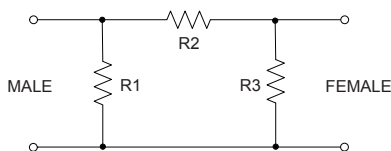
### Outline Drawing



### Outline Dimensions (inch/mm)

| B    | D     | E    | F    | wt    |
|------|-------|------|------|-------|
| .36  | .85   | .312 | .312 | grams |
| 9.14 | 21.59 | 7.92 | 7.92 | 4.3   |

### Electrical Schematic



### Features

- DC to 18000 MHz
- precise attenuation
- excellent VSWR, 1.20 typ.
- stainless steel SMA male and female connectors

### Applications

- matching
- instrumentation
- test set-ups



CASE STYLE: FF658

| Connectors          | Model     | Price     | Qty.   |
|---------------------|-----------|-----------|--------|
| SMA Female-SMA Male | BW-S12W2+ | 29.95 ea. | (1-49) |

### +RoHS Compliant

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

### Electrical Specifications

| FREQ. RANGE (MHz) | ATTENUATION <sup>1</sup> (dB) |          | VSWR <sup>2</sup> (:1) |              |                 | MAX. INPUT POWER <sup>3</sup> (W) |
|-------------------|-------------------------------|----------|------------------------|--------------|-----------------|-----------------------------------|
|                   | Nom.                          | ACCURACY | DC-4 GHz Max.          | 4-8 GHz Max. | 8-12.4 GHz Max. |                                   |
| $f_L - f_U$       |                               |          |                        |              |                 |                                   |
| DC-18000          | 12                            | ±0.60    | 1.20                   | 1.25         | 1.30            | 2                                 |

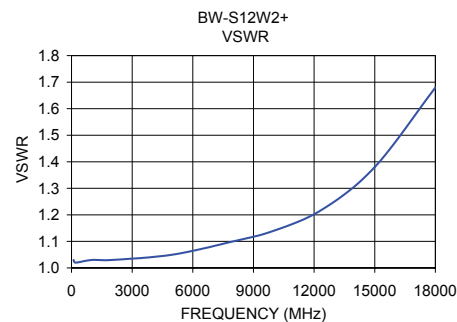
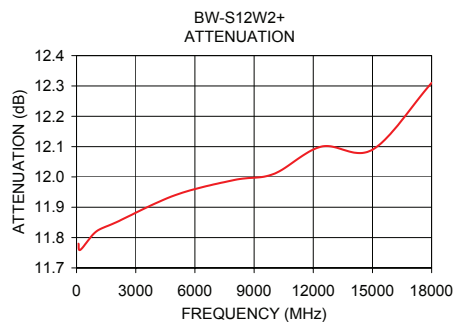
1. At 25°C, accuracy includes frequency and power variations. Temperature coefficient for attenuation: .0004dB/dB/°C typ.

2. VSWR from 12.4 to 18 GHz, 1.6:1 typ.

3. Average power at 25°C ambient, derate linearly to 0.5W at 100°C. Peak Power 125W max. 5μsec pulse width, 100 Hz PRF

### Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 100.00          | 11.78            | 1.03      |
| 199.90          | 11.76            | 1.02      |
| 1000.00         | 11.82            | 1.03      |
| 1999.90         | 11.85            | 1.03      |
| 5000.00         | 11.94            | 1.05      |
| 7999.90         | 11.99            | 1.10      |
| 9999.90         | 12.01            | 1.14      |
| 12400.10        | 12.10            | 1.22      |
| 15000.00        | 12.09            | 1.38      |
| 18000.00        | 12.31            | 1.68      |



### 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](http://www.minicircuits.com/MCLStore/terms.jsp)

