



Mini-Circuits®

COAXIAL

Precision Fixed Attenuator **BW-S12W2+**

50Ω 2 W 12 dB DC to 18 GHz SMA-Female to SMA-Male

## FEATURES

- DC to 18 GHz
- Precision Attenuation
- Excellent VSWR, 1.20 Typ.
- Stainless Steel SMA Male and Female Connectors

## APPLICATIONS

- Impedance Matching
- Instrumentation
- Test Setups



Generic photo used for illustration purposes only

Model No.	BW-S12W2+
Case Style	FF658
Connectors	SMA-Female to SMA-Male

**+RoHS Compliant**

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

## ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		18	GHz
Attenuation, Nominal			12		dB
Attenuation, Accuracy <sup>1</sup>	DC - 18		±0.60		dB
VSWR <sup>2</sup>	DC - 4			1.20	:1
	4 - 8			1.25	
	8 - 12.4			1.30	
Input Power <sup>3</sup>				2.0	W

1. At +25°C, accuracy includes frequency and power variations. Temperature coefficient for attenuation: .0004 dB/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 0.5 W at +100°C. Peak Power 125 W max. 5 μsec. pulse width, 100 Hz PRF.

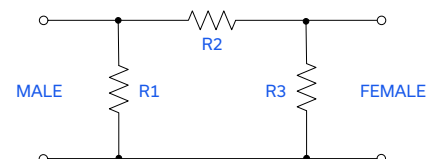
## ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-55°C to +100°C
Storage Temperature <sup>4</sup>	-55°C to +100°C

4. With mated connectors. Unmated, +85°C max.

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

## ELECTRICAL SCHEMATIC



REV. F  
ECO-024322  
BW-S12W2+  
MCL NY  
250127





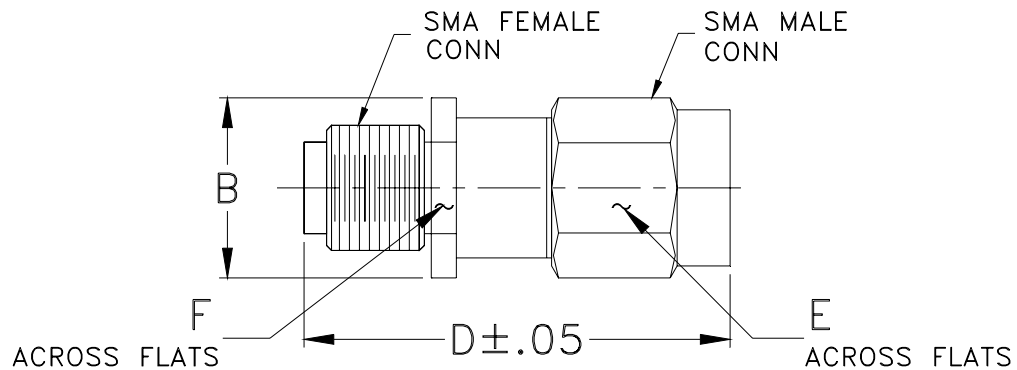
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## OUTLINE DRAWING



## OUTLINE DIMENSIONS (Inch mm)

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



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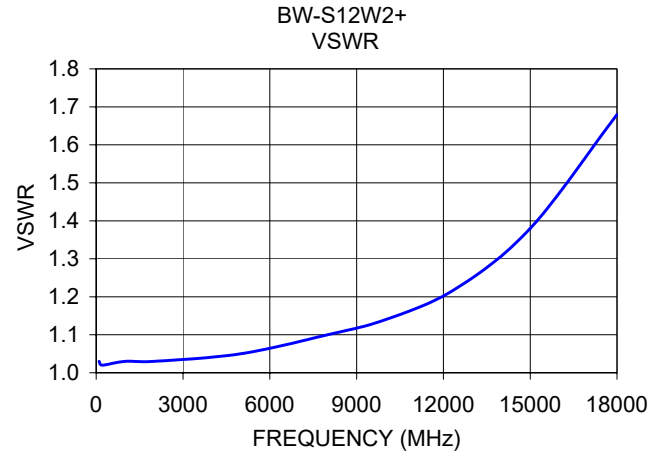
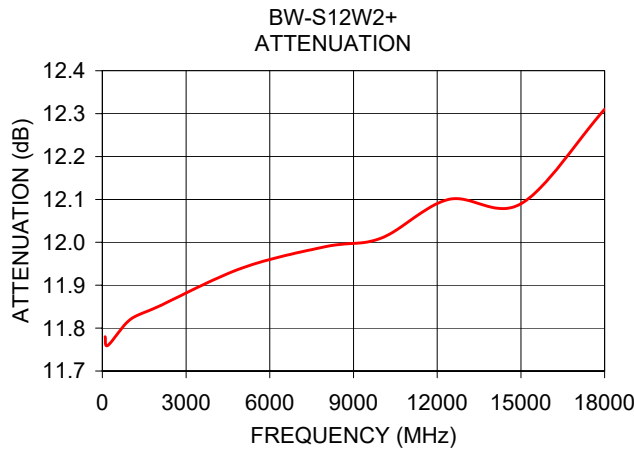
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## TYPICAL PERFORMANCE DATA AND CHARTS

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

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- 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](http://www.minicircuits.com/terms/viewterm.html)

