



COAXIAL MILLIMETER WAVE

Precision Fixed Attenuator **BW-S20-2W263A+**

50Ω 2W 20dB DC to 26 GHz

THE BIG DEAL

- DC to 26 GHz
- Precise attenuation
- Excellent VSWR, 1.06 typ.
- Passivated stainless steel connectors



Generic photo used for illustration purposes only

Model No.	BW-S20-2W263A+
Case Style	FF3336
Connectors	SMA-Fem to SMA-Male

+RoHS Compliant

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

APPLICATIONS

- Matching
- Instrumentation
- Test set-ups

PRODUCT OVERVIEW

The BW-SX-2W263A+ Series of precision fixed attenuators achieves ultra-wide frequency range with excellent VSWR. Available in a variety of attenuation values for different requirements, these units support a broad range of system and testing applications. Precise performance, excellent VSWR and wide band features make these models ideal solutions for systems requiring precise attenuation across very wide frequency range.

KEY FEATURES

Feature	Advantages
Ultra wideband, DC to 26 GHz	Ideal for an exceptionally wide variety of applications.
Excellent VSWR, 1.06 typ.	Efficient power utilization with low power reflected back to source.
Passivated stainless steel connectors	Rugged construction withstands harsh environmental conditions for high reliability and long life of use.

REV. A
ECO-014386
BW-S20-2W263A+
QE/CP/AM
220801





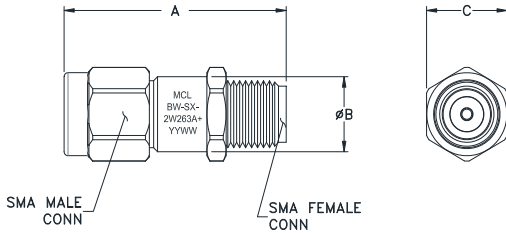
Precision Fixed Attenuator **BW-S20-2W263A+**

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.
 ** With mated connectors.

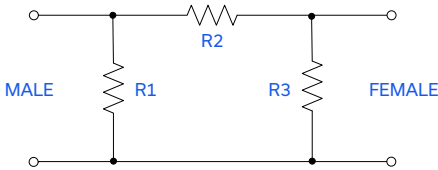
OUTLINE DRAWING



OUTLINE DIMENSIONS (Inches/mm)

dB Value	A	B	C	Wt Grams (Max.)
0-10	.86 (21.84)	.28	.312	6.0
15,20,30	1.02 (25.91)	(7.1)	(7.92)	

ELECTRICAL SCHEMATIC



ELECTRICAL SPECIFICATIONS AT 25°C

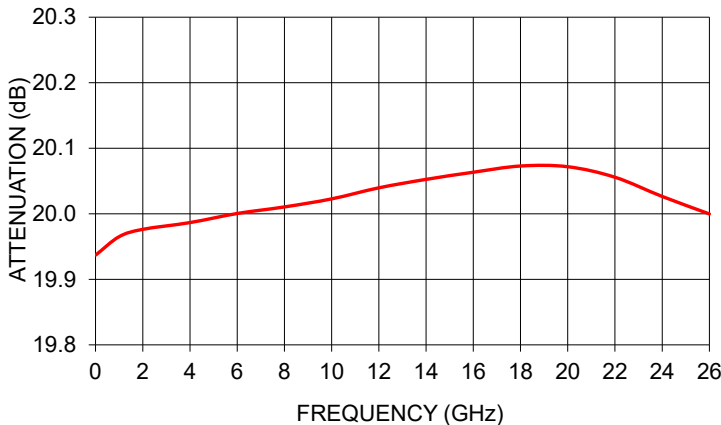
Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		26	GHz
Attenuation ¹	DC - 26	19.25	20.03	20.75	dB
VSWR	DC - 6	—	1.03	1.15	:1
	6 - 18	—	1.06	1.30	
	18 - 26	—	1.09	1.40	
Input Power ²	DC - 26	—	—	2	W

1. At 25°C, accuracy includes frequency and power variations.
 2. Max. Power at 25°C ambient, derate linearly to 0.5W at 125°C. Peak power 250W max. 5µsec. pulse width, 10% duty cycle.

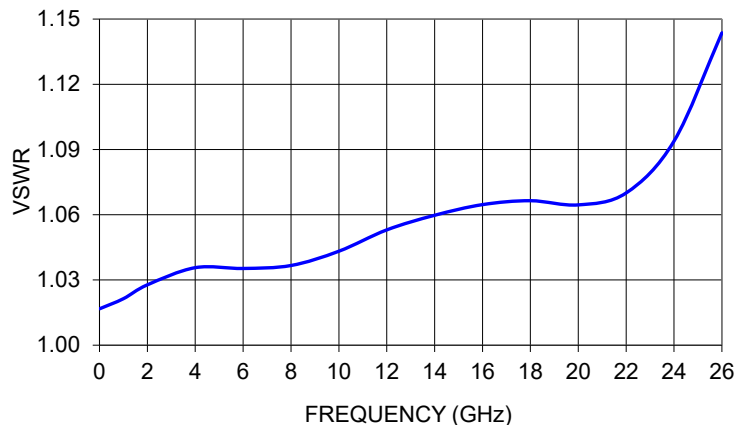
TYPICAL PERFORMANCE DATA

Frequency (GHz)	Attenuation (dB)	VSWR (:1)
0.01	19.94	1.02
1.00	19.97	1.02
2.00	19.98	1.03
4.00	19.99	1.04
6.00	20.00	1.04
8.00	20.01	1.04
10.00	20.02	1.04
12.00	20.04	1.05
14.00	20.05	1.06
16.00	20.06	1.06
18.00	20.07	1.07
20.00	20.07	1.06
22.00	20.06	1.07
24.00	20.03	1.09
26.00	20.00	1.14

BW-S20-2W263A+ ATTENUATION



BW-S20-2W263A+ VSWR



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/terms/viewterm.html

Fixed Attenuator

BW-S20-2W263A+

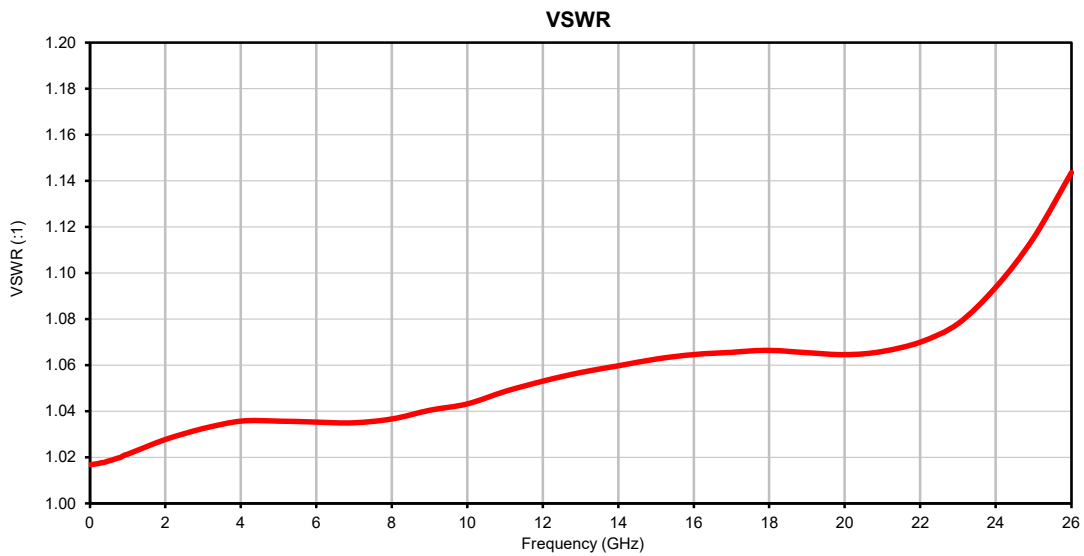
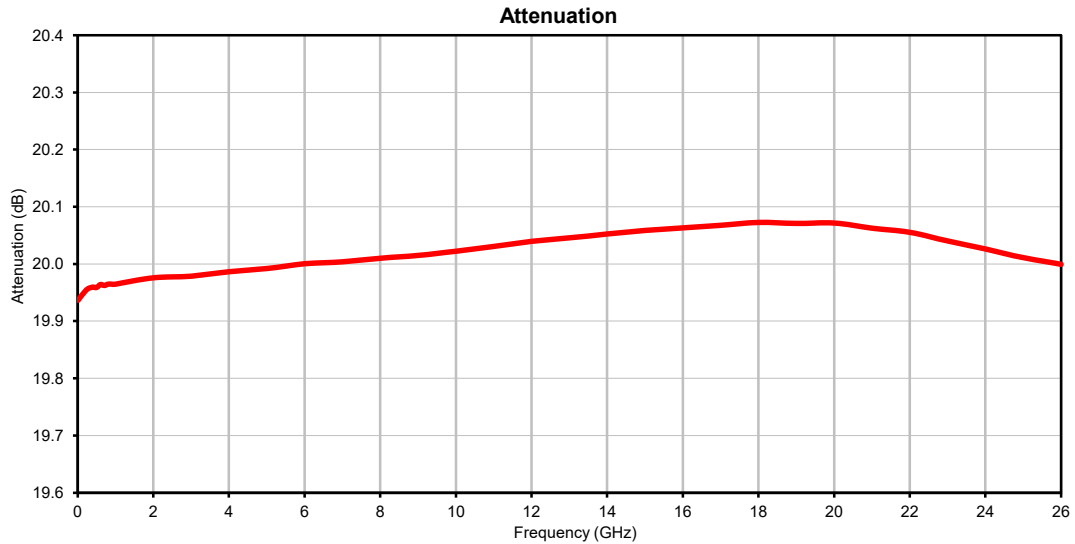
Typical Performance Data

FREQUENCY (GHz)	ATTENUATION (dB)	VSWR (:1)
0.01	19.94	1.02
0.2	19.95	1.02
0.3	19.96	1.02
0.4	19.96	1.02
0.5	19.96	1.02
0.6	19.96	1.02
0.7	19.96	1.02
0.8	19.97	1.02
0.9	19.96	1.02
1.0	19.97	1.02
2.0	19.98	1.03
3.0	19.98	1.03
4.0	19.99	1.04
5.0	19.99	1.04
6.0	20.00	1.04
7.0	20.00	1.04
8.0	20.01	1.04
9.0	20.02	1.04
10.0	20.02	1.04
11.0	20.03	1.05
12.0	20.04	1.05
13.0	20.05	1.06
14.0	20.05	1.06
15.0	20.06	1.06
16.0	20.06	1.06
17.0	20.07	1.07
18.0	20.07	1.07
19.0	20.07	1.07
20.0	20.07	1.06
21.0	20.06	1.07
22.0	20.06	1.07
23.0	20.04	1.08
24.0	20.03	1.09
25.0	20.01	1.12
26.0	20.00	1.14

Fixed Attenuator

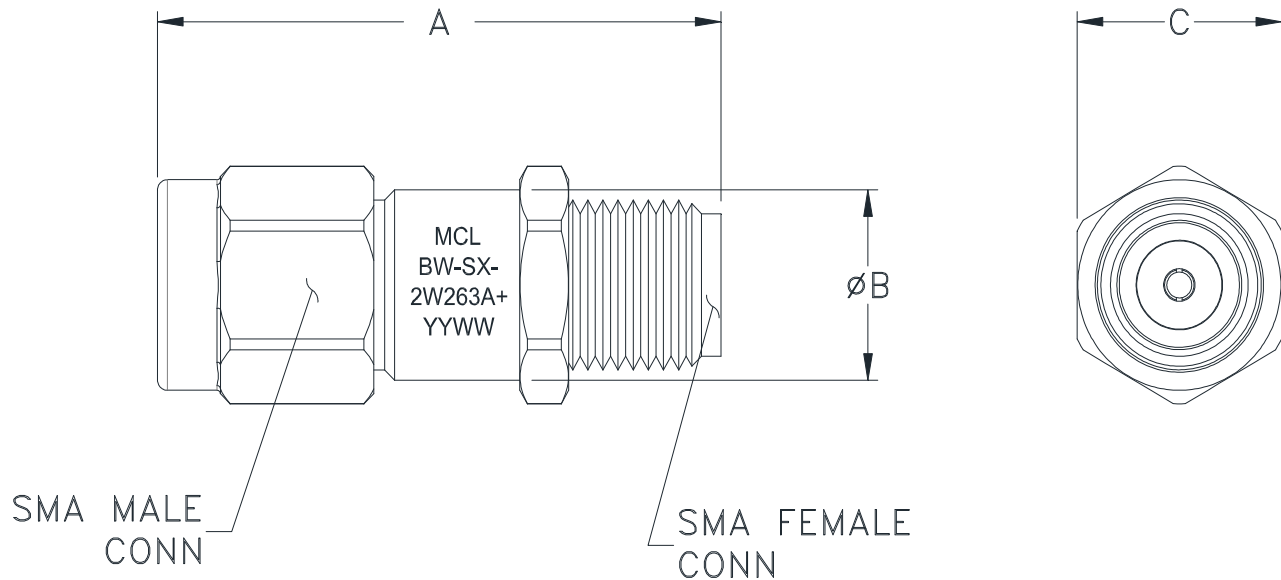
BW-S20-2W263A+

Typical Performance Curves



Outline Dimensions

FF3336



dB VALUE	A	B	C	WT GRAMS (MAX)
0-10	.86 (21.84)	.28 (7.1)	.312 (7.92)	6.0
15,20,30	1.02 (25.91)			

Dimensions are in inches (mm). Tolerances: 2Pl ± .03; 3Pl ± .015

Notes:

1. Case material: Stainless steel.
2. Case finish: Passivated.



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to +100 °C	Individual Model Data Sheet
Storage Temperature	-55° to +100 °C	Individual Model Data Sheet
Burn-in	16Hrs Ambient Environment	
Thermal Shock	-55°C to +100°C, 100 cycles, 15 mins dwell at extreme temperatures	MIL-STD-202, Method 107
Vibration	20g peak, 10-2000 Hz 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11ms half-sine, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition A
Drop Test	1.0m drops onto concrete of packed box in 6 orientations	