

Precision Fixed Attenuator

BW-N20W5+

50Ω 5W 20dB DC to 18000 MHz



Generic photo used for illustration purposes only

CASE STYLE: DC736

Connectors	Model
N-Female N-Male	BW-N20W5+

+RoHS Compliant

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

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.	

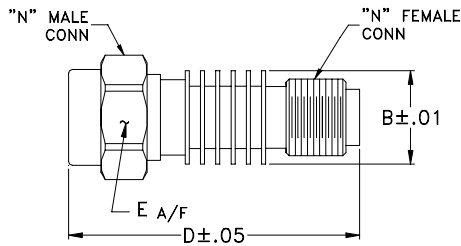
Features

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

Applications

- matching
- instrumentation
- test set-ups

Outline Drawing



Outline Dimensions (inch/mm)

B	D	E	wt
.61	1.90	.812	grams
15.49	48.26	20.62	49.7

Electrical Specifications

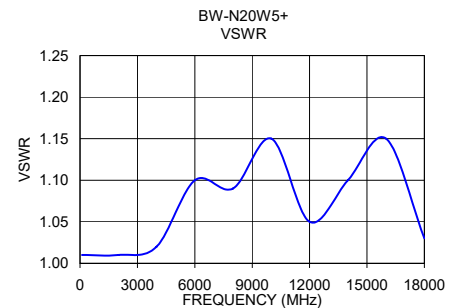
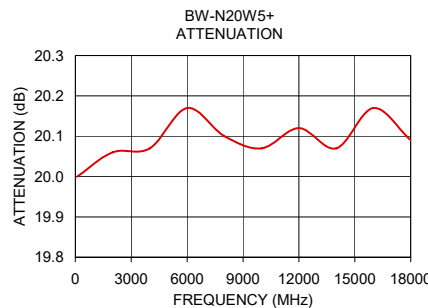
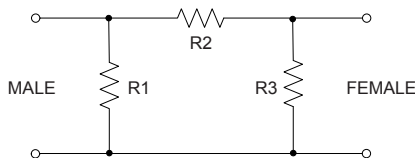
FREQ. RANGE (MHz)	ATTENUATION ¹ (dB)		VSWR ² (:1)			MAX. INPUT POWER ³ (W)
	Nom.	ACCURACY	DC-4 GHz Max.	4-8 GHz Max.	8-12.4 GHz Max.	
$f_L - f_U$ DC-18000	20	-0.5, +0.8	1.20	1.25	1.30	5

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 2W at 100°C. Peak Power 125W max. 5µsec. pulse width, 100 Hz PRF.

Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
100	20.00	1.01
2000	20.06	1.01
4000	20.07	1.02
6000	20.17	1.10
8000	20.10	1.09
10000	20.07	1.15
12000	20.12	1.05
14000	20.07	1.10
16000	20.17	1.15
18000	20.09	1.03

Electrical Schematic



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-Circuit's 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/WCLStore/terms.jsp



Fixed Attenuator

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Typical Performance Data

FREQUENCY (MHz)	ATTENUATION (dB)	RETURN LOSS (dB)
100.00	20.00	46.06
2000.00	20.06	46.06
4000.00	20.07	40.09
6000.00	20.17	26.44
8000.00	20.10	27.32
10000.00	20.07	23.13
12000.00	20.12	32.26
14000.00	20.07	26.44
16000.00	20.17	23.13
18000.00	20.09	36.61

REV. X1
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IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

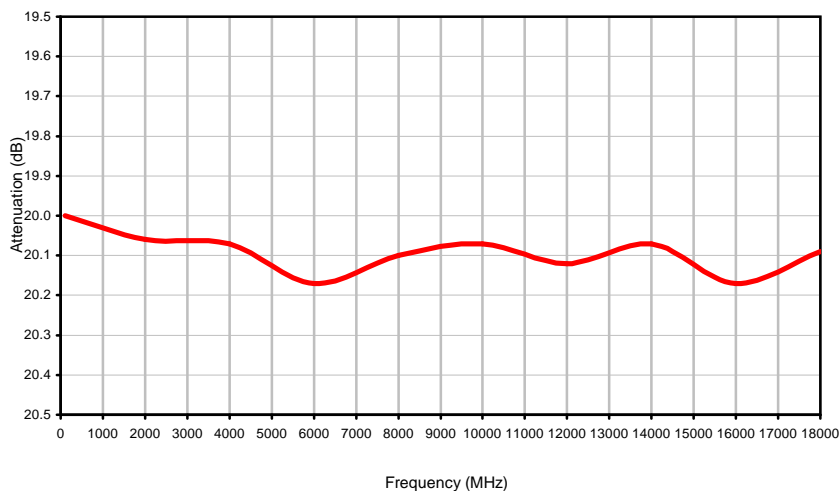


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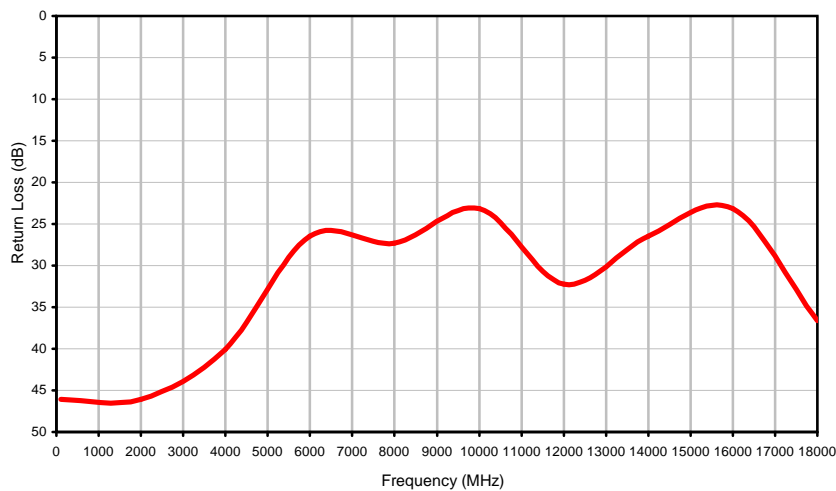


Typical Performance Curves

Attenuation

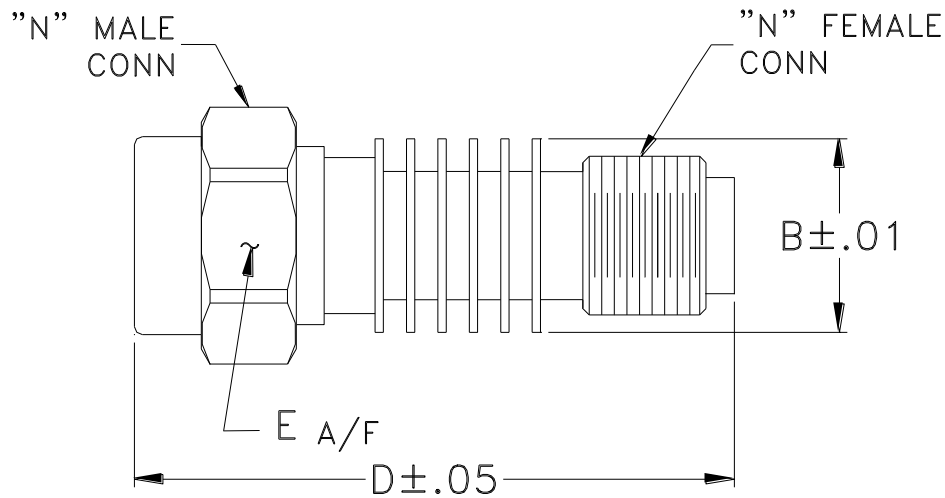


Return Loss



Outline Dimensions

DC736



CASE#	A	B	C	D	E	WT. GRAMS
DC736	--	.61	--	1.90	.812	49.7
	--	(15.49)	--	(48.26)	(20.62)	

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

Notes:

1. Case material: Aluminum alloy.
2. Case finish: Black anodize.



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RF/IF MICROWAVE COMPONENTS

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 Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I