Coaxial, Millimeter Wave

Precision Fixed Attenuator BW-VX-1W54+ Series

50Ω 1W 3,6,10,20 dB DC to 50 GHz

The Big Deal

- Extremely wideband, DC to 50 GHz
- 2.4mm Female - 2.4 mm Male
- Excellent VSWR



CASE STYLE: DJ2264

Product Overview

The BW-VX-1W54+ Series of precision fixed attenuators achieves extremely wide frequency range with excellent VSWR. Available in a variety of attention values for different requirements, these units support a broad range of system and testing applications. Precise performance, excellent VSWR (1.2:1 typ.) and wide band features make these models ideal solutions for systems requiring precise attenuation across very wide frequency range.

Key Features

Feature	Advantages
Extremely wideband, DC to 50 GHz	Ideal for an exceptionally wide variety of applications.
Excellent VSWR, 1.20 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.

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

Coaxial, Millimeter Wave

Precision Fixed Attenuator

BW-V20-1W54+

50Ω 1W 20dB DC to 50 GHz



CASE STYLE: DJ2264

Connectors	Model
2.4mm-Female - 2.4mm Male	BW-V20-1W54+

+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

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

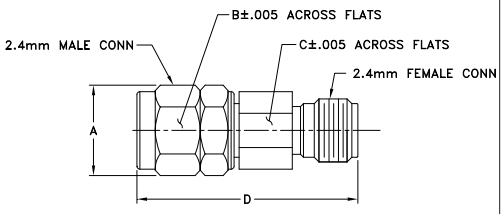
Features

- DC to 50 GHz
- precise attenuation
- excellent VSWR, 1.20 typ.
- passivated stainless steel connectors

Applications

- matching
- instrumentation
- test set-ups

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	wt
0.360	0.312	0.281	0.871	--	grams
9.14	7.93	7.14	22.12	--	5.44

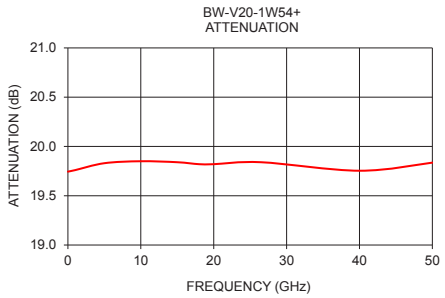
Electrical Specifications at 25°C

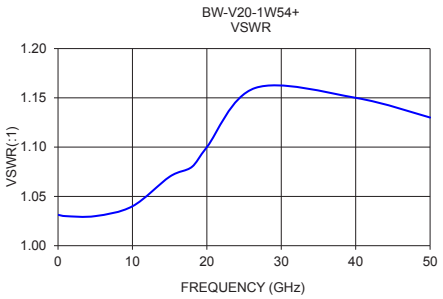
Parameter	Condition (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	—	50	GHz
Attenuation	DC - 26.5	19.25	19.8	20.75	dB
	26.5 - 40	18.75	19.8	21.25	
	40 - 50	18.00	19.7	22.0	
VSWR	DC - 26.5	—	1.2	1.35	:1
	26.5 - 40	—	1.2	1.6	
	40 - 50	—	1.1	1.75	
Input Power[1]	DC - 50	—	—	1	W

1. Max. power at 25°C ambient, derate linearly to 0.1W at 100°C.

Typical Performance Data

Frequency (GHz)	Attenuation (dB)	VSWR (:1)
0.01	19.74	1.03
1.00	19.76	1.03
5.00	19.83	1.03
10.00	19.85	1.04
15.00	19.84	1.07
18.00	19.82	1.08
20.00	19.82	1.10
26.50	19.84	1.16
40.00	19.75	1.15
50.00	19.84	1.13





Notes

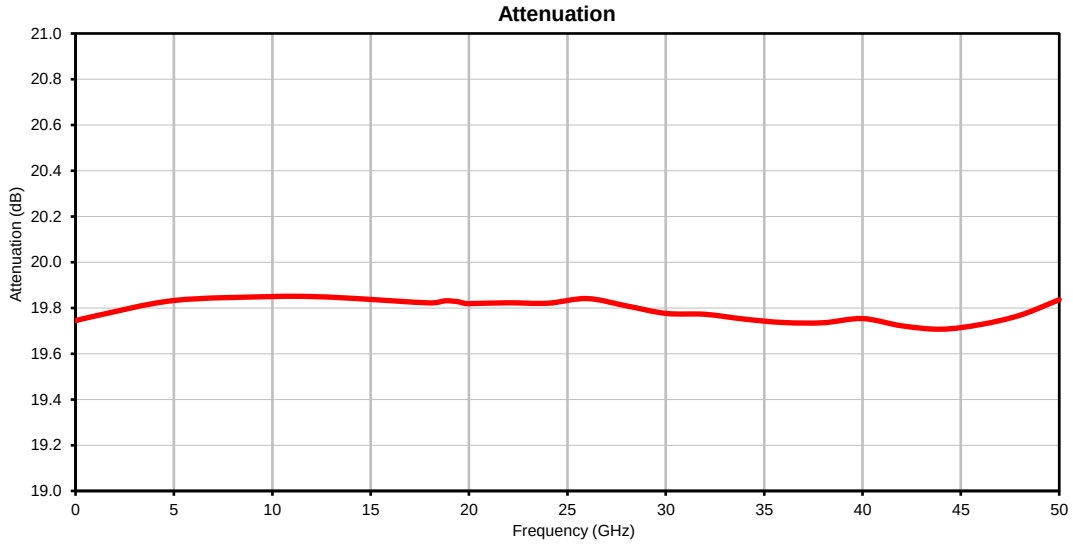
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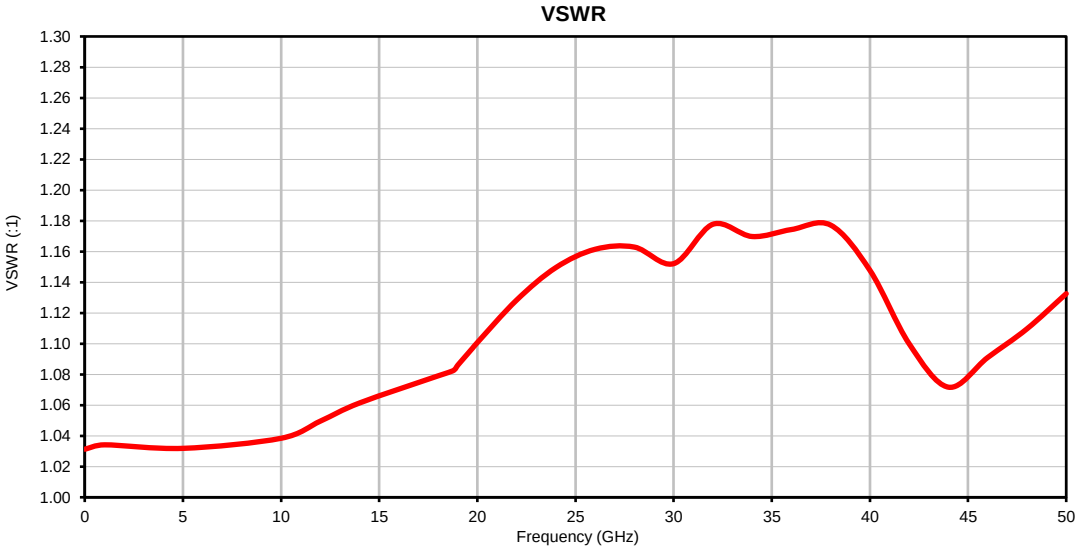
Fixed Attenuator BW-V20-1W54+

Typical Performance Data

FREQUENCY (GHz)	ATTENUATION (dB)	VSWR (:1)
0.01	19.74	1.03
1.0	19.76	1.03
5.0	19.83	1.03
10	19.85	1.04
12	19.85	1.05
14	19.84	1.06
18	19.82	1.08
19	19.83	1.08
19	19.83	1.09
19	19.83	1.09
20	19.83	1.09
20	19.82	1.10
20	19.82	1.10
22	19.82	1.13
24	19.82	1.15
26	19.84	1.16
28	19.81	1.16
30	19.78	1.15
32	19.77	1.18
34	19.75	1.17
36	19.74	1.17
38	19.74	1.18
40	19.75	1.15
42	19.72	1.10
44	19.71	1.07
46	19.73	1.09
48	19.77	1.11
50	19.84	1.13

Typical Performance Curves

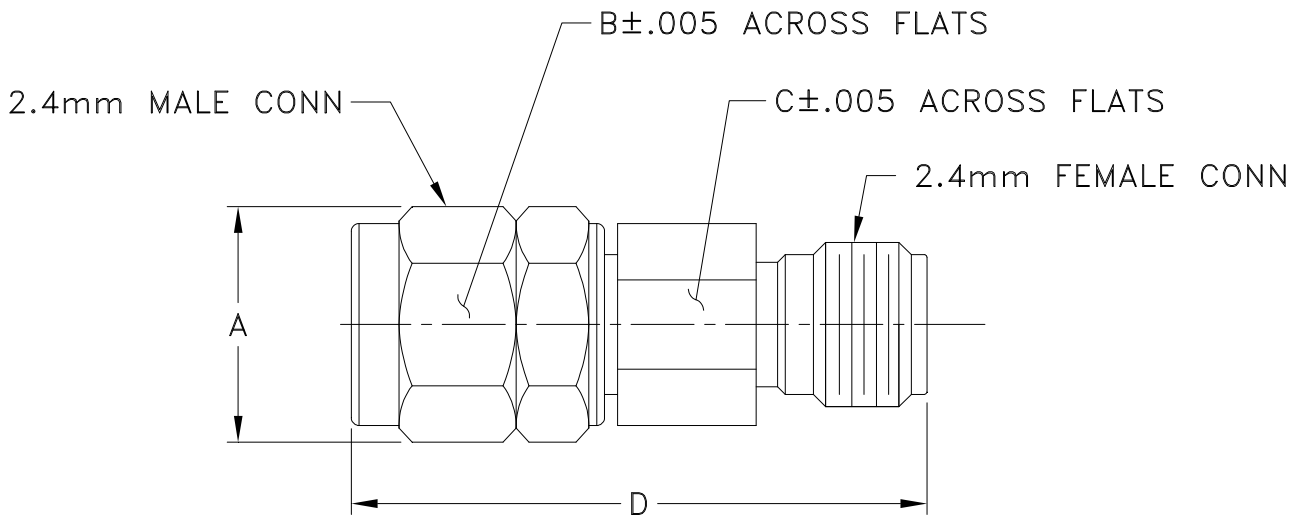




Case Style DJ

DJ2264

Outline Dimensions



CASE #	A	B	C	D	E	WT. GRAM
DJ2264	.36 (9.14)	.312 (7.93)	.281 (7.14)	.871 (22.12)	-- --	5.44

Dimensions are in inches (mm). Tolerances: 2 Pl. ± .002; 3Pl. + .001

Notes:

1. Case material:Stainless Steel.
2. Finish: Passivation.

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Mini-Circuits

Environmental Specifications ENV28

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

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Mini-Circuits:

BFCN-5750+ LFCN-225D+ YAT-9A+ BFCG-1952+ NCS4-272+ PHA-13LN+ PSA-5451+ QCS-83+ BDCA1-10-40+ HFCW-9500+ NCS1-332+ SIM-14+ LHY-84+ TC9-1-75+ BLK-6-N+ DBTC-20-4LX+ EQY-7-453+ KBA-40+ PSA-14+ QCN-25D+ TC4-19G2+ TC4-25X+ TC4-6TX+ 086-3SMRSM+ ADE-5+ DBTC-20-4+ LFCN-1525+ SCBD-10-63HP+ SF-SF50+ TCD-13-4X+