



Mini-Circuits

WAVEGUIDE

Fixed Attenuator

WR22-ATT-20+

50 Ω 0.5 W 20 dB 33 to 50 GHz WR22 to WR22 Flange

KEY FEATURES

- 33 to 50 GHz
- WR22 Waveguide with Round Flange
- Excellent VSWR, 1.1:1 Typ.
- 500 mW Power Handling

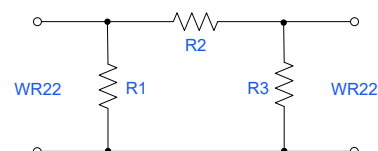


Generic photo used for illustration purposes only

APPLICATIONS

- Optical Communications
- Test & Measurement
- High-speed Data Systems
- Instrumentation
- Precision Measurements

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

The Mini-Circuits catalog model WR22-ATT-20+ is a precision fixed 20 dB 500 mW attenuator. WR22-ATT-20+ operates over an extremely wide frequency range with excellent VSWR and supports a broad range of system and testing applications. Precise performance, excellent VSWR and wide bandwidth make this model an ideal solution for systems requiring accurate attenuation across a very wide frequency range.

ELECTRICAL SPECIFICATIONS AT +25 °C, $Z_0 = 50 \Omega$

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range	-	33	-	50	GHz
Attenuation	33-36	12.0	19.8	28.0	dB
	36-39	12.0	20.0	28.0	
	39-42	12.0	20.6	28.0	
	45-48	12.0	21.4	28.0	
	48-50	12.0	22.5	28.0	
VSWR	33-36	-	1.1	1.7	:1
	36-39	-	1.1	1.7	
	39-42	-	1.1	1.7	
	45-48	-	1.1	1.7	
	48-50	-	1.1	1.7	

ABSOLUTE MAXIMUM RATINGS¹

Parameter	Ratings
Operating Case Temperature	+10 °C to +40 °C
Storage Temperature	-40 °C to +85 °C

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

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REV. OR
ECO-028563
WR22-ATT-20+
MCL NY
260219

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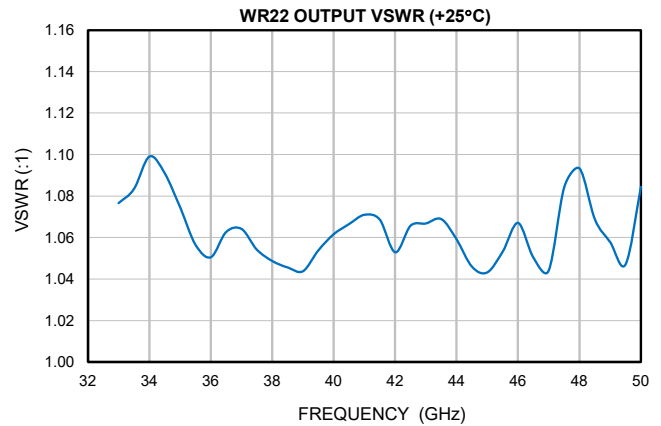
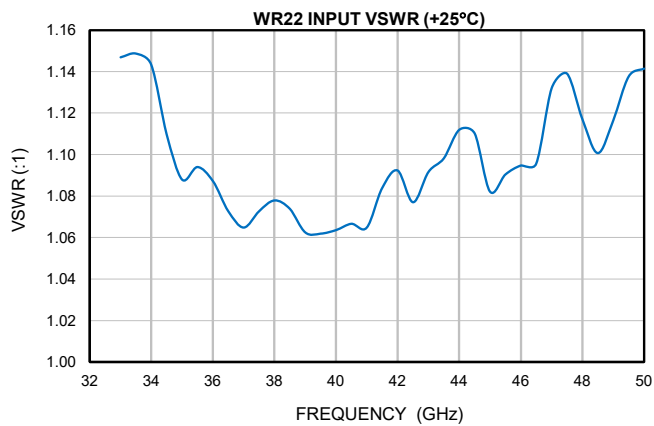
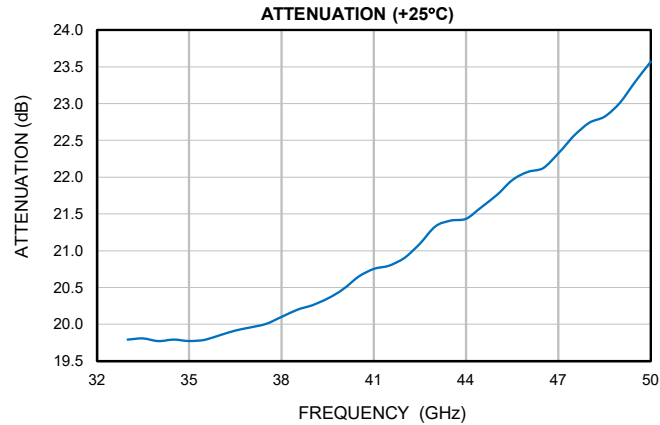
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TYPICAL PERFORMANCE GRAPHS





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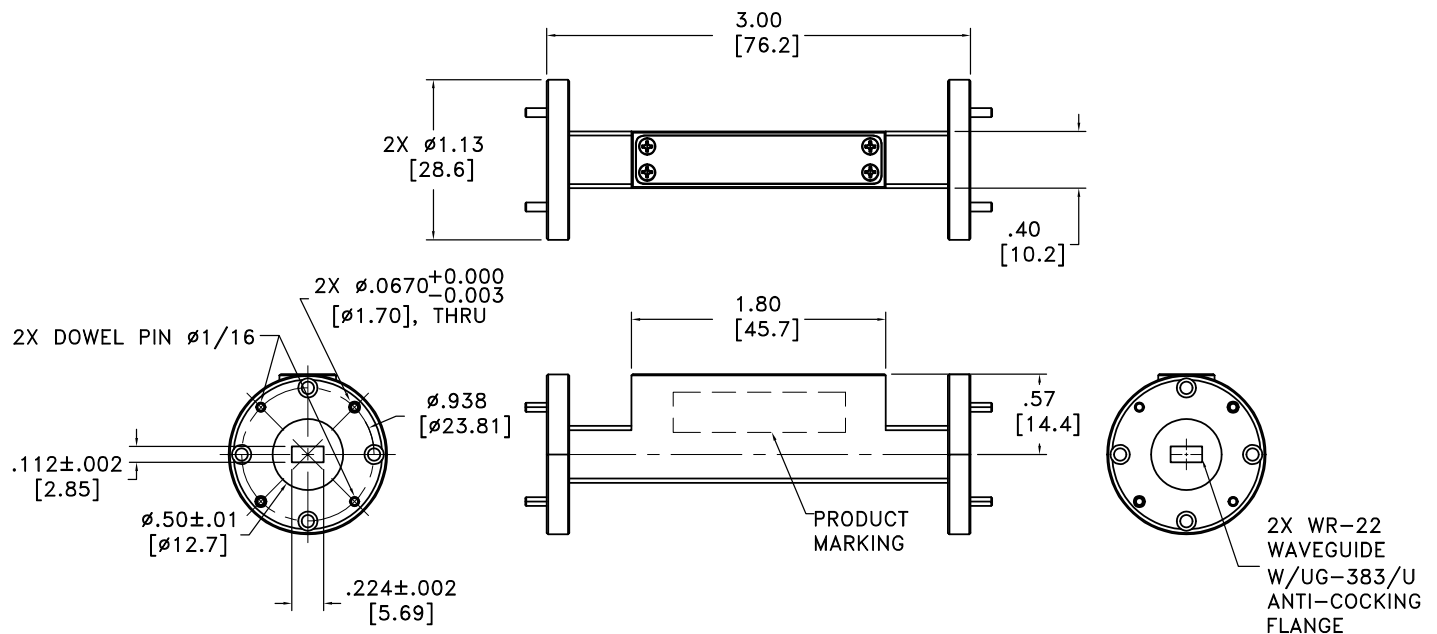
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COAXIAL CONNECTIONS

Description	RF1 PORT	RF2 PORT
Connector Type	WR22 Flange	WR22 Flange
Orientation	Straight	Straight

CASE STYLE DRAWING



Weight: 119.068 grams

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

PRODUCT MARKING*: WR22-ATT-20+

*Marking may contain other features or characters for internal lot control.





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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

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Performance Data & Graphs	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file)
Case Style	UW3808-1
RoHS Status	Compliant
Environmental Ratings	ENV145

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

