WAVEGUIDE

Fixed Attenuator

WR19-ATT-10+

50Ω 0.5 W 10 dB 40 to 60 GHz WR19 to WR19 Flange

KEY FEATURES

- 40 to 60 GHz
- WR19 Waveguide with Round Flange
- Excellent VSWR, 1.1:1 Typ.
- 500 mW Power Handling

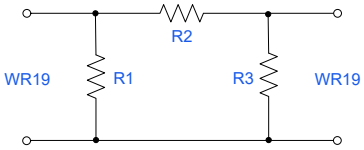


Generic photo used for illustration purposes only

APPLICATIONS

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

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

The Mini-Circuits catalog model WR19-ATT-10+ is a precision fixed 10 dB 500 mW attenuator. WR19-ATT-10+ 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 Ω

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range		40	-	60	GHz
Attenuation	40-44	6.0	8.8	14.0	dB
	44-48	6.0	9.2	14.0	
	48-52	6.0	9.8	14.0	
	52-56	6.0	10.6	14.0	
	56-60	6.0	11.5	14.0	
VSWR	40-44	-	1.1	1.7	:1
	44-48	-	1.1	1.7	
	48-52	-	1.1	1.7	
	52-56	-	1.1	1.7	
	56-60	-	1.1	1.7	

ABSOLUTE MAXIMUM RATINGS[1]

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

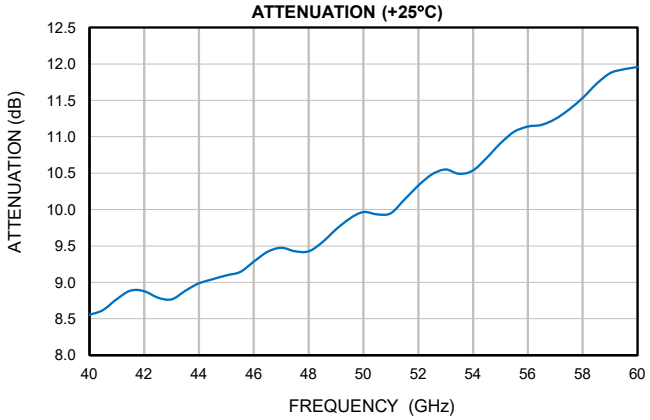
1. Permanent damage may occur if any of these limits are exceeded.

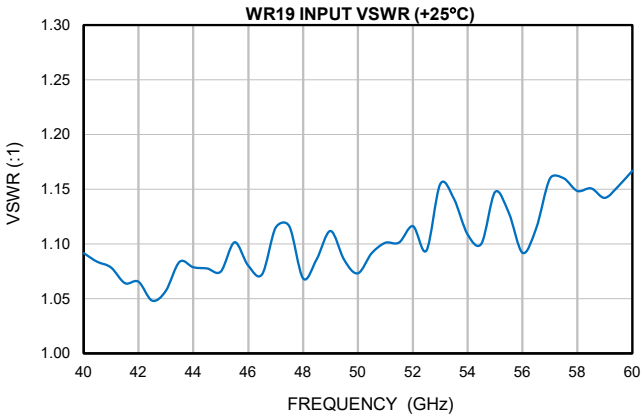
Fixed Attenuator

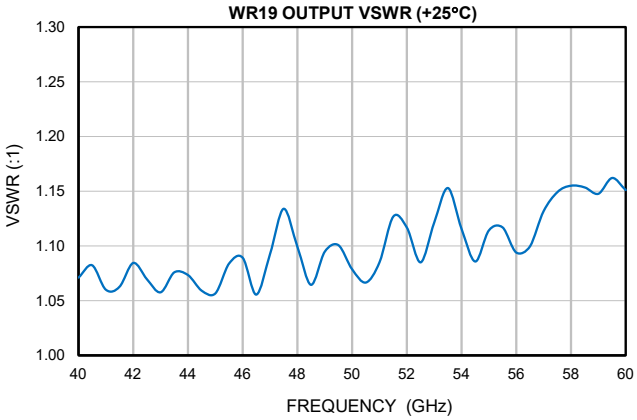
WR19-ATT-10+

50Ω 0.5 W 10 dB 40 to 60 GHz WR19 to WR19 Flange

TYPICAL PERFORMANCE GRAPHS







WAVEGUIDE

Fixed Attenuator

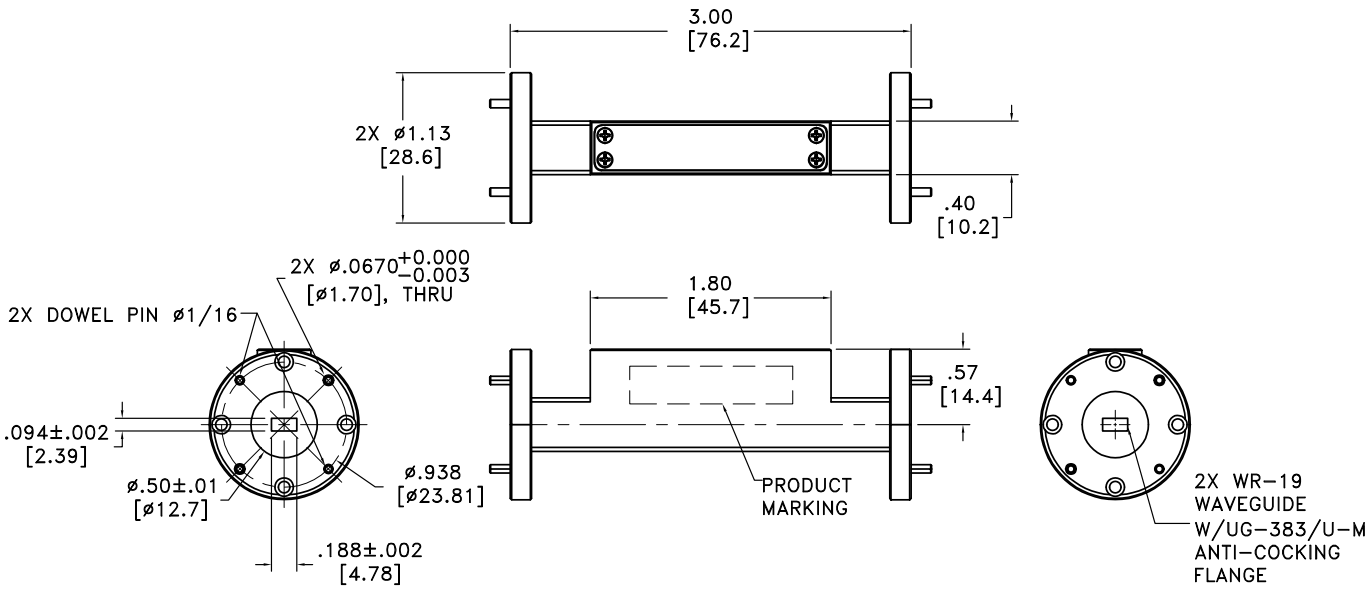
WR19-ATT-10+

50Ω 0.5 W 10 dB 40 to 60 GHz WR19 to WR19 Flange

WAVEGUIDE CONNECTIONS

Description	RF1 PORT	RF2 PORT
Connector Type	WR19 Flange	WR19 Flange
Orientation	Straight	Straight

CASE STYLE DRAWING



Weight: 121.90 grams
Dimensions are in inches [mm]. Tolerances: 2 Pl.±.03; 3 Pl. ±.015

PRODUCT MARKING*: WR-19-ATT-10+

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

WAVEGUIDE

Fixed Attenuator

WR19-ATT-10+

50Ω 0.5 W 10 dB 40 to 60 GHz WR19 to WR19 Flange

ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD CLICK HERE

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

NOTES

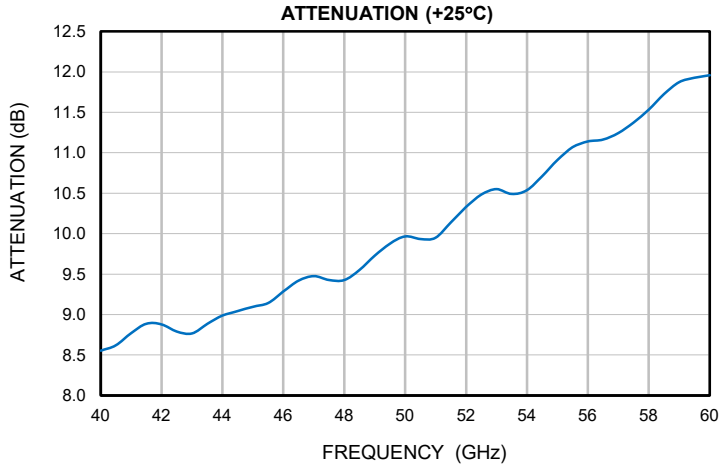
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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

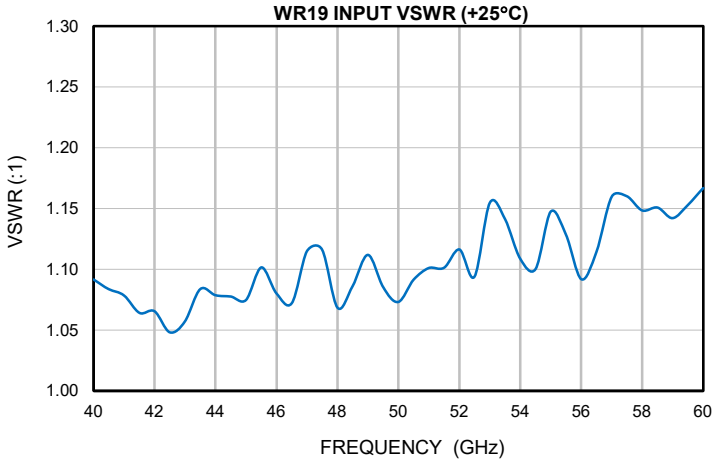
Fixed Attenuator WR19-ATT-10+

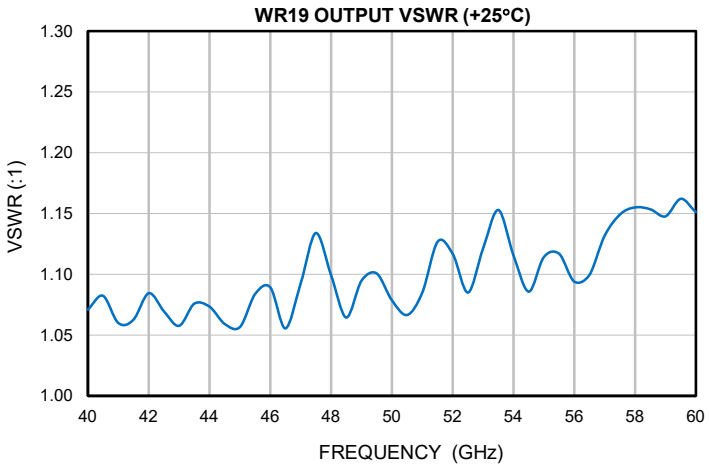
Typical Performance Data (+25°C)

FREQ.	ATTENUATION	WR19 INPUT VSWR	WR19 OUTPUT VSWR
(GHz)	(dB)	(:1)	(:1)
40.0	8.55	1.09	1.07
40.5	8.62	1.08	1.08
41.0	8.77	1.08	1.06
41.5	8.89	1.06	1.06
42.0	8.88	1.07	1.08
42.5	8.79	1.05	1.07
43.0	8.77	1.06	1.06
43.5	8.88	1.08	1.08
44.0	8.99	1.08	1.07
44.5	9.04	1.08	1.06
45.0	9.10	1.07	1.06
45.5	9.14	1.10	1.08
46.0	9.28	1.08	1.09
46.5	9.42	1.07	1.06
47.0	9.48	1.11	1.09
47.5	9.43	1.12	1.13
48.0	9.43	1.07	1.10
48.5	9.55	1.09	1.06
49.0	9.73	1.11	1.09
49.5	9.88	1.09	1.10
50.0	9.97	1.07	1.08
50.5	9.93	1.09	1.07
51.0	9.95	1.10	1.08
51.5	10.14	1.10	1.13
52.0	10.33	1.12	1.12
52.5	10.48	1.09	1.08
53.0	10.55	1.15	1.12
53.5	10.49	1.14	1.15
54.0	10.54	1.11	1.12
54.5	10.71	1.10	1.09
55.0	10.91	1.15	1.11
55.5	11.07	1.13	1.12
56.0	11.14	1.09	1.09
56.5	11.16	1.11	1.10
57.0	11.24	1.16	1.13
57.5	11.38	1.16	1.15
58.0	11.53	1.15	1.16
58.5	11.73	1.15	1.15
59.0	11.87	1.14	1.15
59.5	11.93	1.15	1.16
60.0	11.96	1.17	1.15

Typical Performance Curves

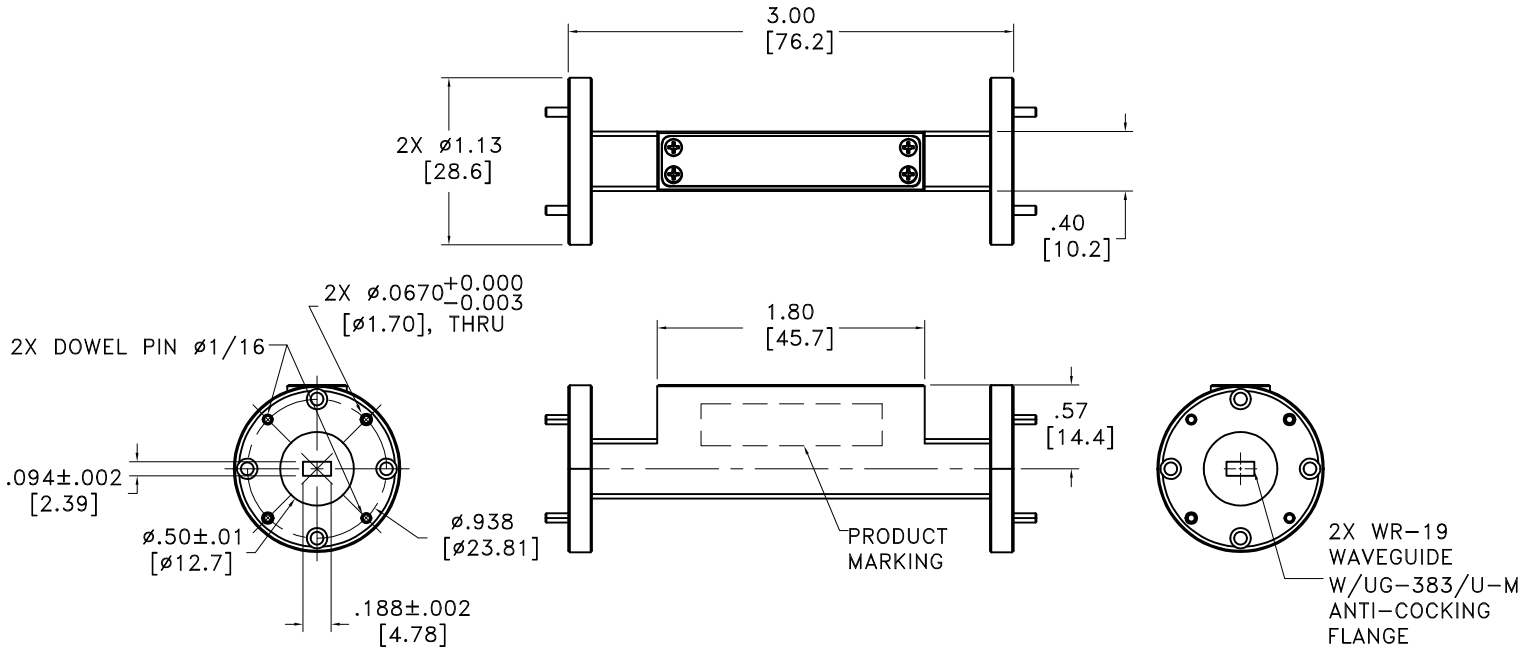






Case Style UW

Outline Dimensions UW3808



Weight: 121.90 grams

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

Notes:

1. Case material: Brass.
2. Case Finish: Gold plated.

Mini-Circuits®
ISO 9001 ISO 14001 CERTIFIED
ALL NEW minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site
The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com
RF/IF MICROWAVE COMPONENTS

Mini-Circuits

Environmental Specifications ENV145

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	10° to 40° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet

This document and its contents are the property of Mini-Circuits.