



COAXIAL

Fixed Attenuator

UNAT-A-SERIES

Mini-Circuits

50Ω Up to 2W DC to 6000 MHz

THE BIG DEAL

- Wideband coverage, DC to 6000 MHz
- Up to 2 Watt rating
- Rugged unibody construction
- Excellent VSWR
- Excellent flatness



Generic photo used for illustration purposes only

APPLICATIONS

- Signal level adjustment
- Impedance matching

Model No.	UNAT-A-SERIES
Case Style	FF779
Connectors	N-Type

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

PRODUCT OVERVIEW

Mini-Circuits' UNAT-A series are fixed attenuators from DC to 6000 MHz frequency range with excellent flatness in attenuation. UNAT-A series is available with nominal attenuation of 1 to 30 dB. This attenuator series support testing and measurement application. Precise performance, excellent VSWR and rugged unibody construction makes this model ideal solution for systems requiring precise attenuation across very wide frequency range.

KEY FEATURES

Feature	Advantages
Rugged construction	Excellent durability for a long lifetime of use
Up to 2 Watt rating	Good power handling
Excellent VSWR	Well matched for 50Ω systems
Flat attenuation	Good performance over the band

REV. B
 ECO-019296
 UNAT-20A+
 EDU4158
 URJ
 230923





COAXIAL

Fixed Attenuator

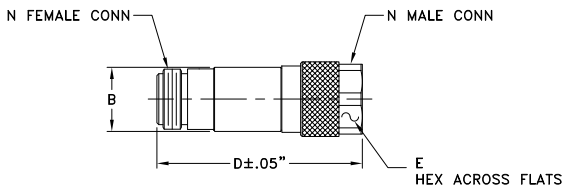
UNAT-20A+

MAXIMUM RATINGS

Operating Temperature	-45°C to 100°C
Storage Temperature	-55°C to 100°C

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

OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch / mm)

A	B	C	D	E	Wt.
--	.71	--	2.11	.718	grams
--	18.03	--	53.59	18.24	72.5

Note: Please refer to case style drawing for details

ELECTRICAL SPECIFICATIONS AT 25°C

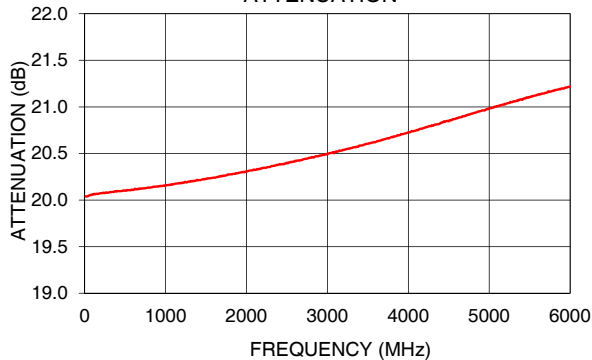
Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	-	6000	MHz
Attenuation ¹ nominal ³	10	-	20 ± 0.3	-	dB
Attenuation Flatness ²	DC - 3000	-	0.40	-	dB
	3000 - 4500	-	0.40	-	
	4500 - 6000	-	0.40	-	
	DC - 6000	-	0.75	-	
VSWR	DC - 3000	-	1.2	1.57	:1
	3000 - 4500	-	1.2	1.57	
	4500 - 6000	-	1.2	-	
Input Power ⁴		-	-	0.8	W

1. Attenuation varies by 0.3 dB max. over temperature.
2. Flatness = variation over band divided by 2.
3. Nominal attenuation at 10 MHz
4. RF power at 25°C is 0.8W; Derate linearly to 0.6W at 85°C

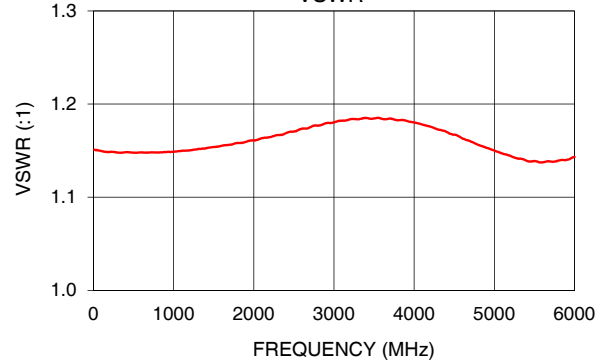
TYPICAL PERFORMANCE DATA

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
10	20.04	1.15
100	20.06	1.15
500	20.10	1.15
900	20.15	1.15
1000	20.16	1.15
1400	20.21	1.15
1500	20.23	1.15
2000	20.31	1.16
2500	20.40	1.17
2800	20.46	1.18
3000	20.49	1.18
4000	20.73	1.18
4500	20.85	1.17
5000	20.99	1.15
6000	21.22	1.14

UNAT-20A+ ATTENUATION



UNAT-20A+ VSWR



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/MCLStore/terms.jsp



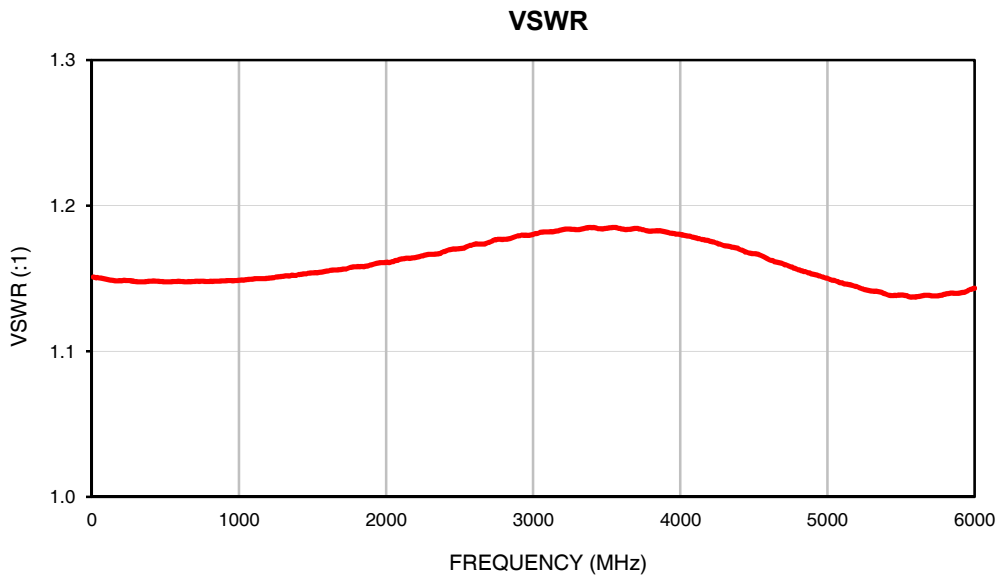
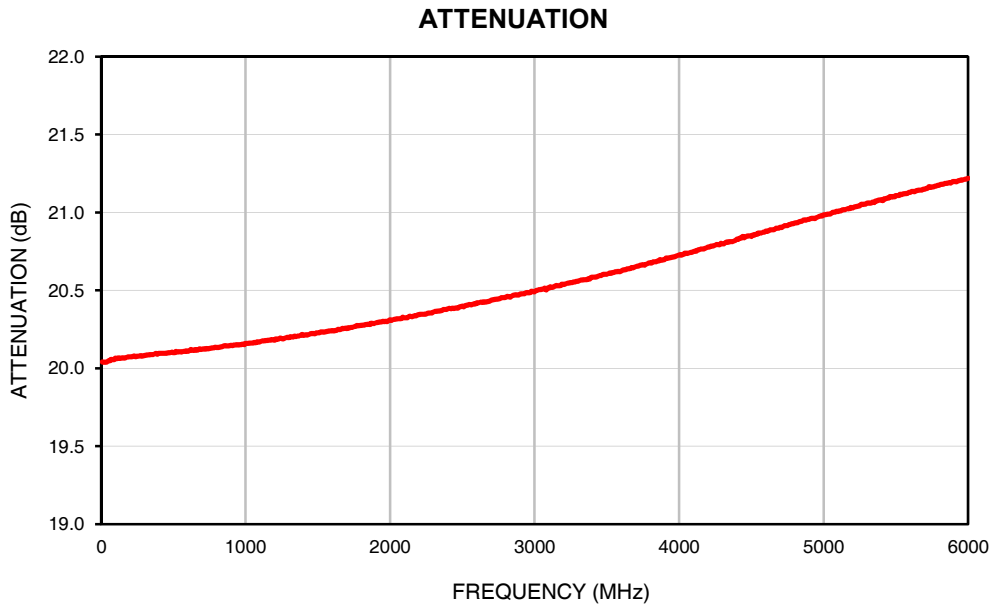
Coaxial Fixed Attenuator

UNAT-20A+

Typical Performance Data

FREQ.	ATTENUATION	VSWR
(MHz)	(dB)	(:1)
10	20.04	1.15
20	20.04	1.15
50	20.05	1.15
100	20.06	1.15
200	20.07	1.15
300	20.08	1.15
400	20.10	1.15
500	20.10	1.15
600	20.11	1.15
700	20.12	1.15
800	20.13	1.15
900	20.15	1.15
1000	20.16	1.15
1100	20.17	1.15
1200	20.18	1.15
1300	20.20	1.15
1400	20.21	1.15
1500	20.23	1.15
1600	20.24	1.16
1700	20.26	1.16
1800	20.28	1.16
1900	20.29	1.16
2000	20.31	1.16
2100	20.32	1.16
2200	20.34	1.16
2300	20.36	1.17
2400	20.38	1.17
2500	20.40	1.17
2600	20.42	1.17
2700	20.44	1.17
2800	20.46	1.18
2900	20.48	1.18
3000	20.49	1.18
3100	20.52	1.18
3200	20.54	1.18
3300	20.56	1.18
3400	20.58	1.18
3500	20.60	1.18
3600	20.62	1.18
3700	20.65	1.18
3800	20.68	1.18
3900	20.70	1.18
4000	20.73	1.18
4100	20.75	1.18
4200	20.78	1.18
4300	20.80	1.17
4400	20.83	1.17
4500	20.85	1.17
4600	20.88	1.16
4700	20.90	1.16
4800	20.93	1.16
4900	20.96	1.15
5000	20.99	1.15
5100	21.01	1.15
5200	21.03	1.14
5300	21.06	1.14
5400	21.08	1.14
5500	21.11	1.14
5800	21.17	1.14
6000	21.22	1.14

Typical Performance Curves

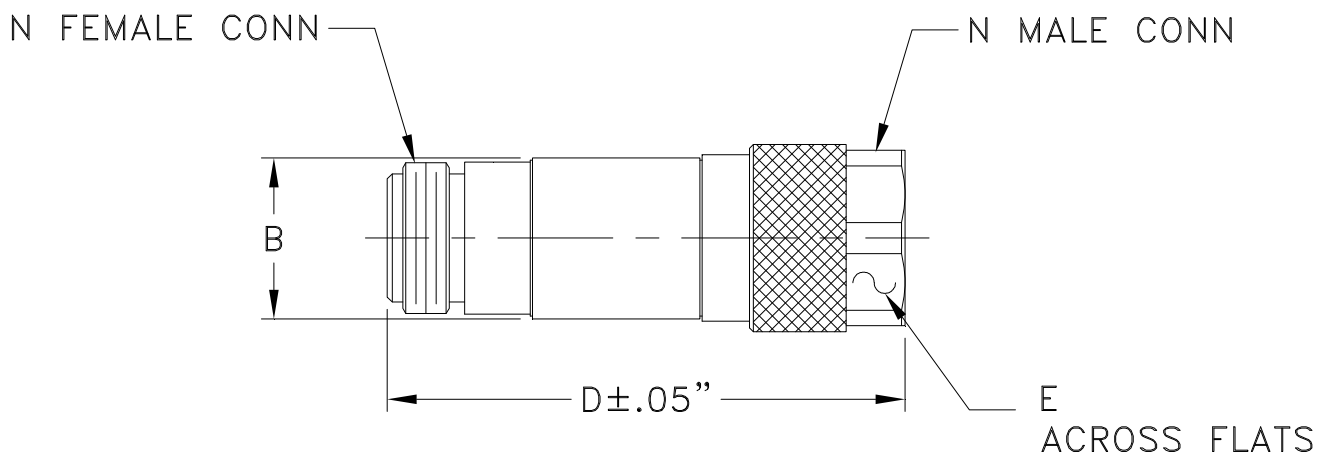


Case Style

FF

Outline Dimensions

FF779



CASE #.	A	B	C	D	E	WT GRAMS
FF779	--	.71 (18.03)	--	2.11 (53.59)	.718 (18.24)	72.5

Dimensions are in inches (mm). Tolerances: 2Pl. +.05/-0.04; 3Pl. ± .030

Notes:

1. Case material: Brass.
2. Case finish: Nickel plate.

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ALL NEW

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RF/IF MICROWAVE COMPONENTS

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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	-45° 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