



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 the 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 50 Ω systems
Flat attenuation	Good performance over the band

REV. B
 ECO-019296
 UNAT-30A+
 EDU4159
 URJ
 230923





COAXIAL

Fixed Attenuator

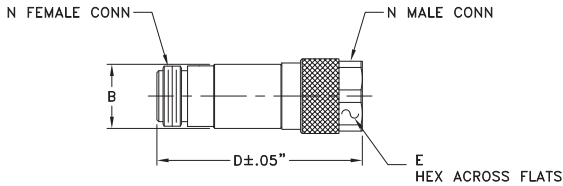
UNAT-30A+

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

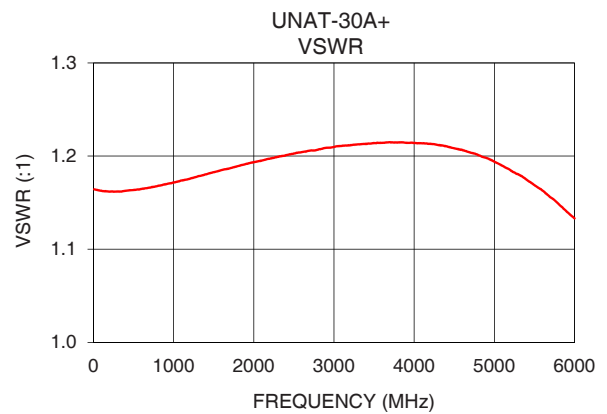
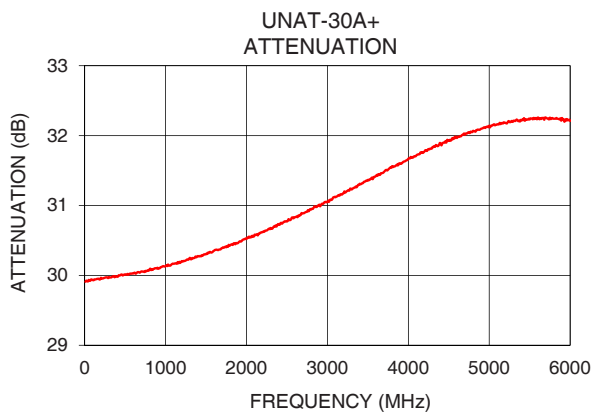
ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	-	6000	MHz
Attenuation ¹ nominal ³	10	-	30 ± 0.3	-	dB
Attenuation Flatness ²	DC - 3000	-	1.0	-	dB
	3000 - 4500	-	0.7	-	
	4500 - 6000	-	0.4	-	
	DC - 6000	-	2.0	-	
VSWR	DC - 3000	-	1.2	1.67	:1
	3000 - 4500	-	1.2	1.67	
	4500 - 6000	-	1.3	-	
Input Power ⁴		-	-	1.0	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 1.0W; Derate linearly to 0.8W at 85°C

TYPICAL PERFORMANCE DATA

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
10	29.91	1.16
100	29.94	1.16
500	30.01	1.16
900	30.11	1.17
1000	30.13	1.17
1400	30.28	1.18
1500	30.31	1.18
2000	30.52	1.19
2500	30.77	1.20
2800	30.94	1.21
3000	31.05	1.21
4000	31.67	1.21
4500	31.92	1.21
5000	32.14	1.19
6000	32.21	1.13



- 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

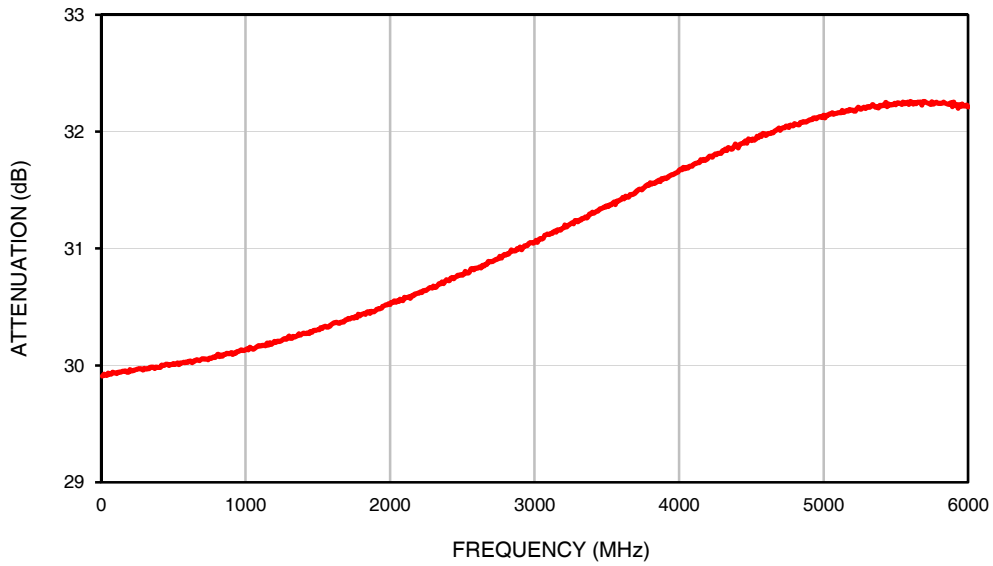


Typical Performance Data

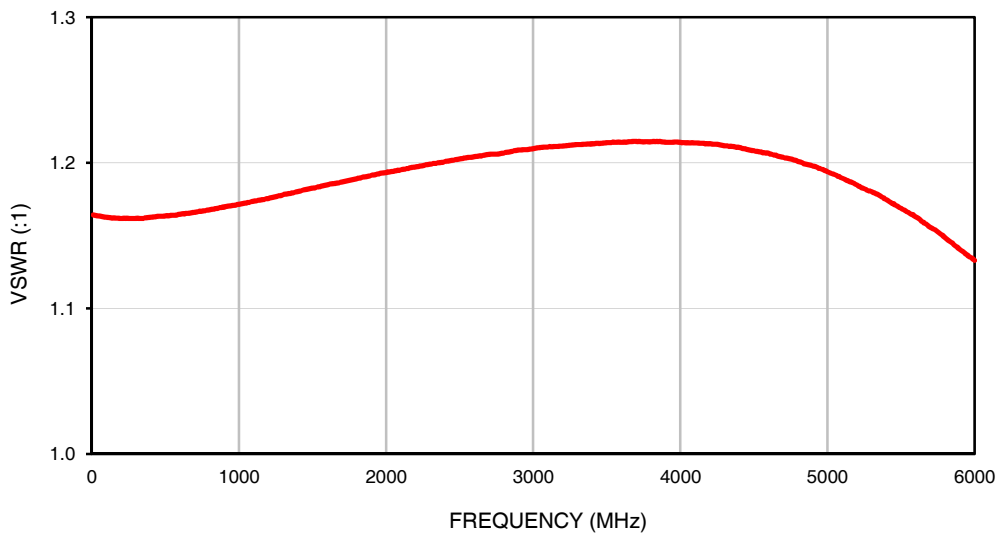
FREQ.	ATTENUATION	VSWR
(MHz)	(dB)	(:1)
10	29.91	1.16
20	29.92	1.16
50	29.93	1.16
100	29.94	1.16
200	29.96	1.16
300	29.98	1.16
400	29.98	1.16
500	30.01	1.16
600	30.03	1.16
700	30.06	1.17
800	30.08	1.17
900	30.11	1.17
1000	30.13	1.17
1100	30.17	1.17
1200	30.20	1.18
1300	30.25	1.18
1400	30.28	1.18
1500	30.31	1.18
1600	30.35	1.18
1700	30.39	1.19
1800	30.43	1.19
1900	30.47	1.19
2000	30.52	1.19
2100	30.58	1.20
2200	30.62	1.20
2300	30.68	1.20
2400	30.73	1.20
2500	30.77	1.20
2600	30.83	1.20
2700	30.89	1.21
2800	30.94	1.21
2900	31.01	1.21
3000	31.05	1.21
3100	31.12	1.21
3200	31.18	1.21
3300	31.23	1.21
3400	31.31	1.21
3500	31.37	1.21
3600	31.42	1.21
3700	31.48	1.21
3800	31.56	1.21
3900	31.60	1.21
4000	31.67	1.21
4100	31.72	1.21
4200	31.77	1.21
4300	31.84	1.21
4400	31.88	1.21
4500	31.92	1.21
4600	31.97	1.21
4700	32.01	1.20
4800	32.07	1.20
4900	32.10	1.20
5000	32.14	1.19
5100	32.16	1.19
5200	32.18	1.18
5300	32.21	1.18
5400	32.22	1.17
5500	32.23	1.17
5800	32.24	1.15
6000	32.21	1.13

Typical Performance Curves

ATTENUATION



VSWR

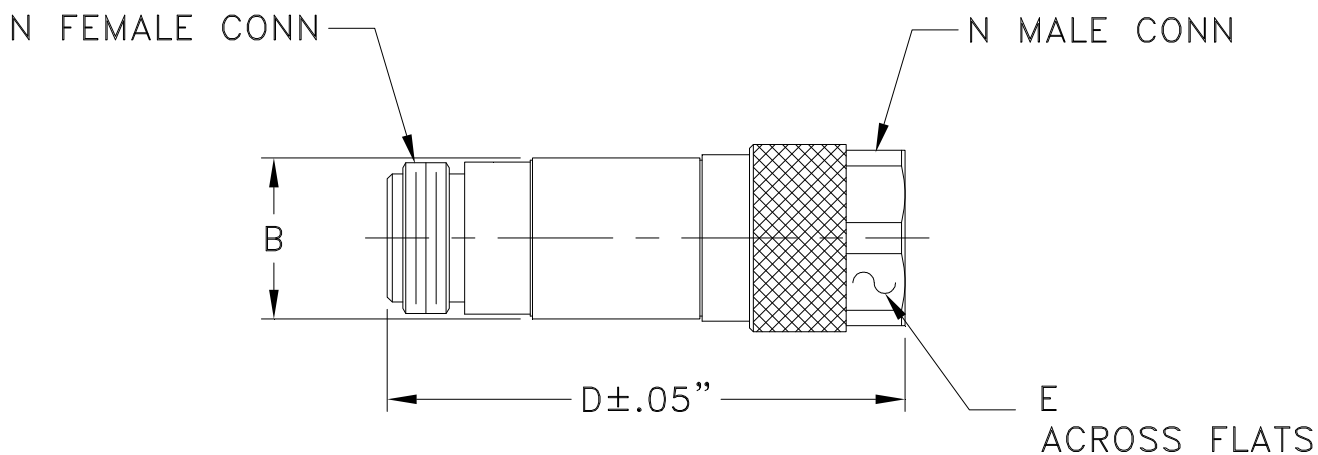


Case Style

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/-.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