COAXIAL

Fixed Attenuator

VAT-15A+

50Ω Up to 1.4 W DC to 6000 MHz 15 dB Attenuation

THE BIG DEAL

- Wideband Coverage, DC to 6000 MHz
- Up to 1.4 Watt Power Handling
- Rugged Unibody Construction
- Excellent VSWR
- Excellent Flatness



Generic photo used for illustration purposes only

Model No.	VAT-15A+
Case Style	FF704
Connectors	SMA

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

APPLICATIONS

- Signal Level Adjustment
- Impedance Matching

PRODUCT OVERVIEW

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

KEY FEATURES

Feature	Advantages
Rugged construction	Excellent durability for a long lifetime of use
Up to 1.4 Watt power handling	Good power handling
Excellent VSWR	Well-matched for 50 Ω systems
Flat attenuation	Good performance over the band

REV. C
ECO-029367
VAT-15A+
EDU4143
MCINU
260630

COAXIAL

Fixed Attenuator

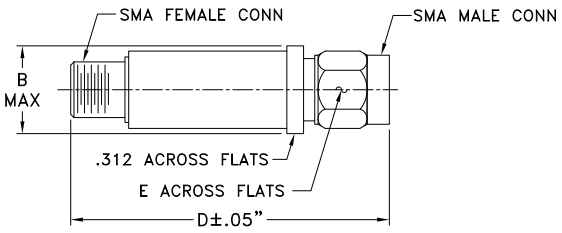
VAT-15A+

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

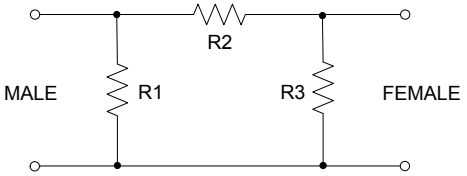


OUTLINE DIMENSIONS (Inch / mm)

B	D	E	wt
.410	1.43	.312	grams
10.41	36.32	7.92	10.0

Note: Please refer to case style drawing for details

ELECTRICAL SCHEMATIC



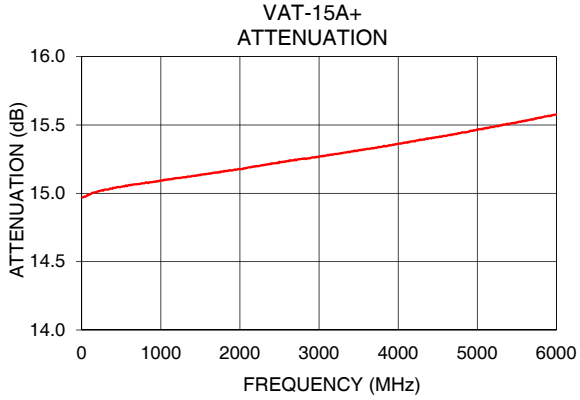
ELECTRICAL SPECIFICATIONS AT 25°C

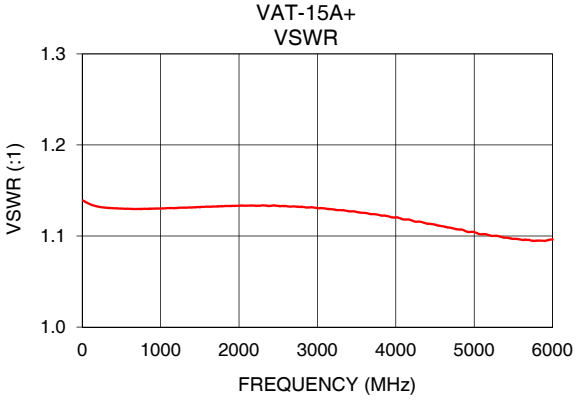
Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	-	6000	MHz
Attenuation[1] nominal[3]	10	-	15 ± 0.3	-	dB
Attenuation Flatness[2]	DC-3000	-	0.3	-	dB
	3000-5000	-	0.3	-	
	5000-6000	-	0.2	-	
	DC-6000	-	0.5	-	
VSWR	DC-3000	-	1.2	1.6	:1
	3000-5000	-	1.2	1.8	
	5000-6000	-	1.3	-	
Input Power[4]		-	-	1.4	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. Maximum RF power at 25°C is 1.4 W; Derate linearly to 1.0 W at 85°C

TYPICAL PERFORMANCE DATA

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
10	14.97	1.14
100	14.99	1.13
500	15.05	1.13
900	15.08	1.13
1000	15.09	1.13
1400	15.13	1.13
1500	15.13	1.13
2000	15.18	1.13
2500	15.23	1.13
2800	15.25	1.13
3000	15.27	1.13
4000	15.36	1.12
4500	15.41	1.11
5000	15.47	1.10
6000	15.58	1.10





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

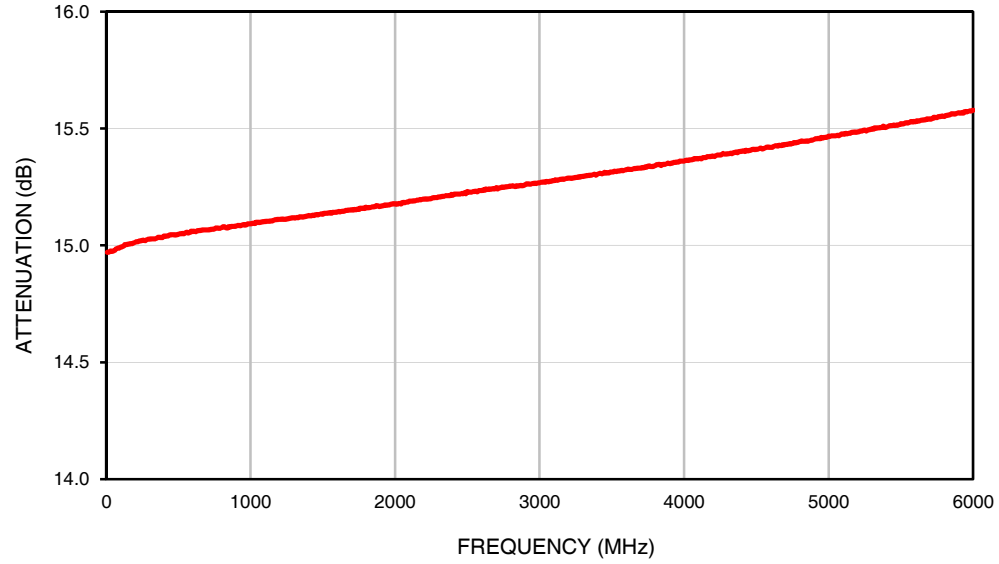
Coaxial Fixed Attenuator VAT-15A+

Typical Performance Data

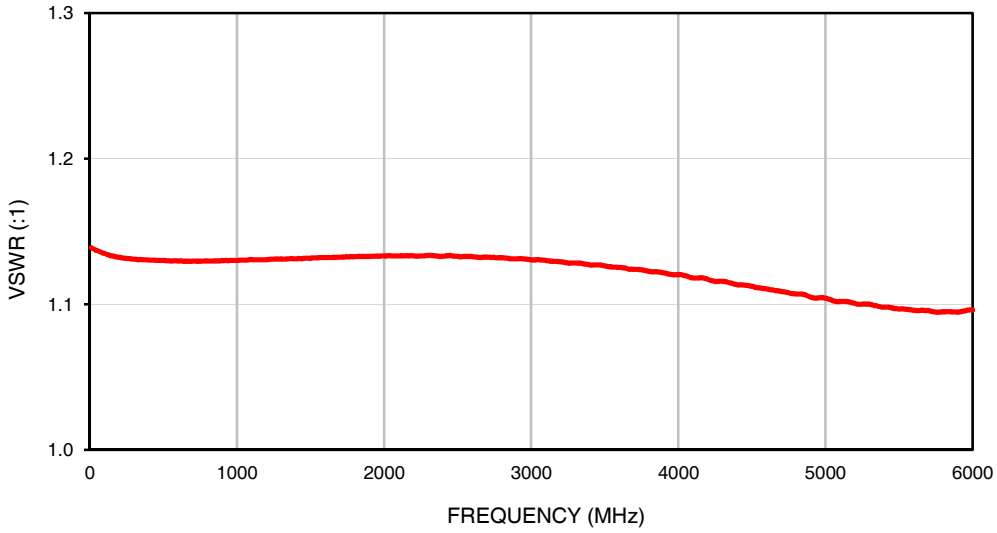
FREQ. (MHz)	ATTENUATION (dB)	VSWR (:1)
10	14.97	1.14
20	14.97	1.14
50	14.98	1.14
100	14.99	1.13
200	15.01	1.13
300	15.03	1.13
400	15.04	1.13
500	15.05	1.13
600	15.06	1.13
700	15.07	1.13
800	15.08	1.13
900	15.08	1.13
1000	15.09	1.13
1100	15.10	1.13
1200	15.11	1.13
1300	15.12	1.13
1400	15.13	1.13
1500	15.13	1.13
1600	15.14	1.13
1700	15.15	1.13
1800	15.16	1.13
1900	15.17	1.13
2000	15.18	1.13
2100	15.19	1.13
2200	15.20	1.13
2300	15.21	1.13
2400	15.21	1.13
2500	15.23	1.13
2600	15.24	1.13
2700	15.25	1.13
2800	15.25	1.13
2900	15.26	1.13
3000	15.27	1.13
3100	15.28	1.13
3200	15.29	1.13
3300	15.30	1.13
3400	15.30	1.13
3500	15.31	1.13
3600	15.32	1.13
3700	15.33	1.12
3800	15.34	1.12
3900	15.35	1.12
4000	15.36	1.12
4100	15.37	1.12
4200	15.38	1.12
4300	15.39	1.12
4400	15.40	1.11
4500	15.41	1.11
4600	15.42	1.11
4700	15.43	1.11
4800	15.44	1.11
4900	15.45	1.11
5000	15.47	1.10
5100	15.48	1.10
5200	15.48	1.10
5300	15.50	1.10
5400	15.51	1.10
5500	15.52	1.10
5800	15.55	1.09
6000	15.58	1.10

Typical Performance Curves

ATTENUATION



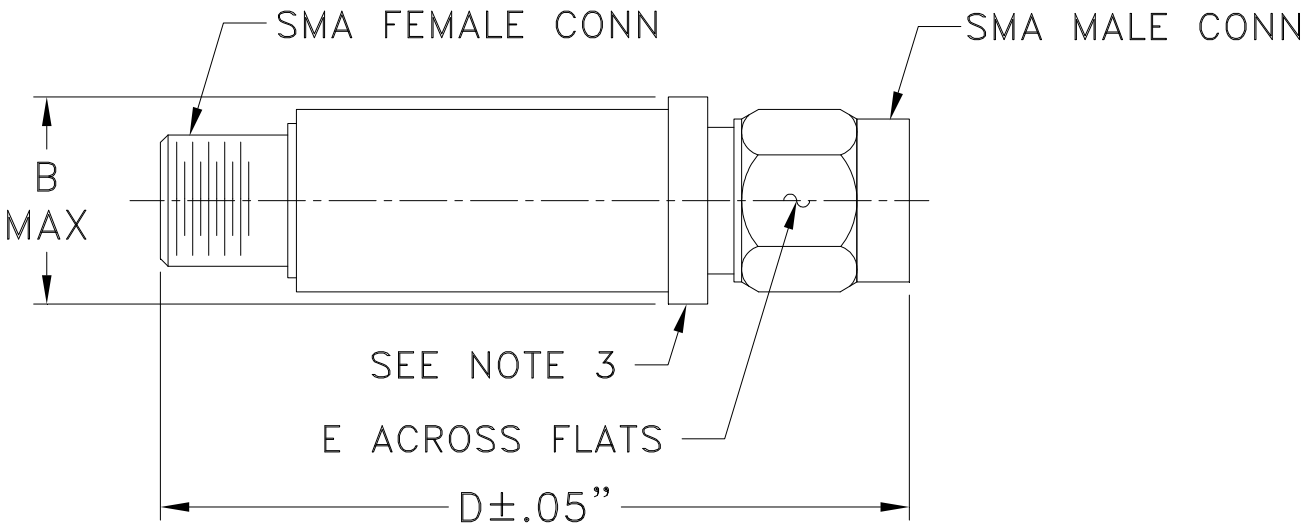
VSWR



Case Style FF

FF704

Outline Dimensions



CASE #.	A	B	C	D	E	WT GRAMS
FF704	-- --	.410 (10.41)	-- --	1.43 (36.32)	.312 (7.92)	10.0

Dimensions are in inches (mm). Tolerances: 2Pl. ± .04; 3Pl. ± .030

Notes:

1. Case material: Stainless steel.
2. Case finish: Gold plated.
3. Round Flange may have .312 Across Flats in some models.

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Mini-Circuits

Environmental Specifications **ENV28T6**

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

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