

# Fixed Attenuator

### **VAT-A-SERIES**

 $50\Omega$  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

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Generic photo used for illustration purposes only

Model No.	VAT-A-SERIES	
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 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 $\Omega$ systems	
Flat attenuation	Good performance over the band.	

# Fixed Attenuator

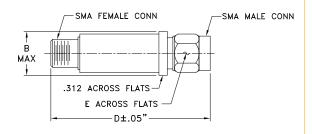
VAT-1A+

#### **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**

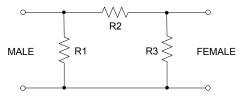


### OUTLINE DIMENSIONS (Inch)

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**



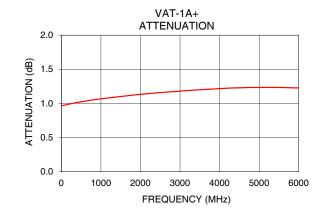
#### **ELECTRICAL SPECIFICATIONS AT 25°C**

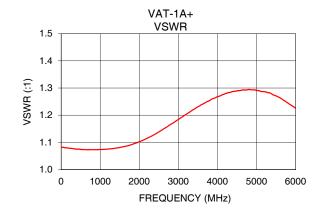
Parameter	Condition (MHz)	Min.	Тур.	Max.	Unit
Frequency Range		DC	-	6000	MHz
Attenuation <sup>1</sup> nominal <sup>3</sup>	10	-	1 ± 0.3	-	dB
Attenuation Flatness <sup>2</sup>	DC-3000	-	0.25	-	
	3000-5000	-	0.15	-	dB
	5000-6000	-	0.15	-	
	DC-6000	-	0.3	-	
	DC-3000	-	1.2	1.45	
VSWR	3000-5000	-	1.3	1.65	:1
	5000-6000	-	1.4	-	
Input Power⁴		-	-	2.0	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 2.0W; Derate linearly to 1.0W at 85°C

#### **TYPICAL PERFORMANCE DATA**

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Frequency (MHz)	Attenuation (dB)	VSWR (:1)			
10	0.96	1.08			
100	0.98	1.08			
500	1.03	1.07			
900	1.06	1.07			
1000	1.07	1.07			
1400	1.10	1.08			
1500	1.10	1.08			
2000	1.13	1.10			
2500	1.16	1.14			
2800	1.17	1.17			
3000	1.18	1.18			
4000	1.22	1.27			
4500	1.23	1.29			
5000	1.23	1.29			
6000	1.23	1.23			





#### 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

