

Coaxial

# SMA Fixed Attenuator

50Ω 1W 1dB DC to 6000 MHz

## VAT-1+



### 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.

### Features

- wideband coverage, DC to 6000 MHz
- 1 watt rating
- rugged unibody construction
- off-the-shelf availability
- very low cost

### Applications

- impedance matching
- signal level adjustment

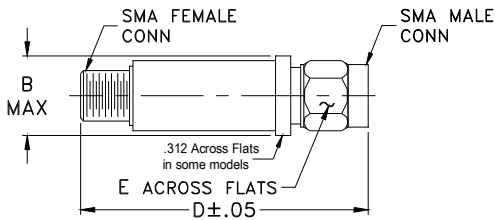
CASE STYLE: FF704

| Connectors | Model  | Price       | Qty.  |
|------------|--------|-------------|-------|
| SMA        | VAT-1+ | \$11.95 ea. | (1-9) |

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Outline Drawing



### Outline Dimensions (inch/mm)

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

### Electrical Specifications

| FREQ.<br>RANGE<br>(MHz) | ATTENUATION *<br>(dB)<br>Flatness ** |         |         |          |      | VSWR<br>(:1) |         |         |      |      | MAX.<br>INPUT<br>POWER<br>(W) |
|-------------------------|--------------------------------------|---------|---------|----------|------|--------------|---------|---------|------|------|-------------------------------|
|                         |                                      |         |         |          |      |              |         |         |      |      |                               |
|                         | DC-3 GHz                             | 3-5 GHz | 5-6 GHz | DC-6 GHz |      | DC-3 GHz     | 3-5 GHz | 5-6 GHz |      |      |                               |
| $f_L$ - $f_U$           | Nom.                                 | Typ.    | Typ.    | Typ.     | Typ. | Typ.         | Max.    | Typ.    | Max. | Typ. |                               |
| DC-6000                 | 1±0.3                                | 0.20    | 0.20    | 0.20     | 0.60 | 1.05         | 1.20    | 1.10    | 1.50 | 1.40 | 1.0                           |

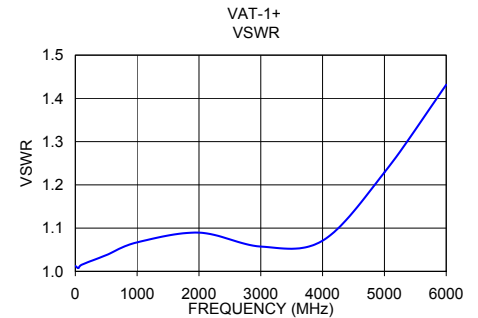
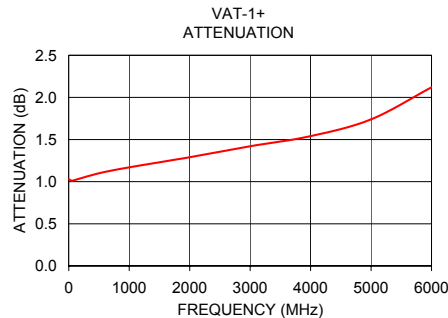
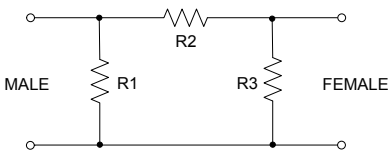
\* Attenuation varies by 0.3 dB max. over temperature.

\*\* Flatness= variation over band divided by 2.

### Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 0.03            | 1.03             | 1.01      |
| 50.00           | 1.01             | 1.01      |
| 100.00          | 1.02             | 1.02      |
| 500.00          | 1.10             | 1.04      |
| 1000.00         | 1.17             | 1.07      |
| 2000.00         | 1.29             | 1.09      |
| 3000.00         | 1.42             | 1.06      |
| 4000.00         | 1.54             | 1.07      |
| 5000.00         | 1.74             | 1.23      |
| 6000.00         | 2.12             | 1.43      |

### Electrical Schematic



**Mini-Circuits®**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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](http://www.minicircuits.com/MCLStore/terms.jsp).

For detailed performance specs & shopping online see web site

REV. G  
M129173  
VAT-1+  
LC/TD/CP/AM  
101007