

Coaxial

SMA Fixed Attenuator

50Ω 1W 5dB DC to 6000 MHz

VAT-5+



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

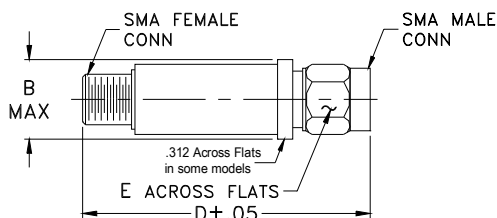
CASE STYLE: FF704

Connectors	Model
SMA	VAT-5+

+RoHS Compliant

The +Suffix identifies 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. RANGE (MHz)	ATTENUATION * (dB)					VSWR (:1)					MAX. INPUT POWER (W)	
	Flatness **											
	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	5±0.3	0.10	0.10	0.10	0.25	1.05	1.20	1.15	1.45	1.40		1.0

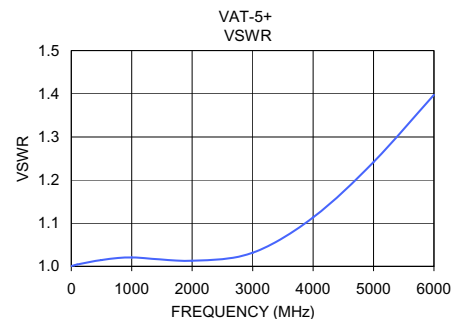
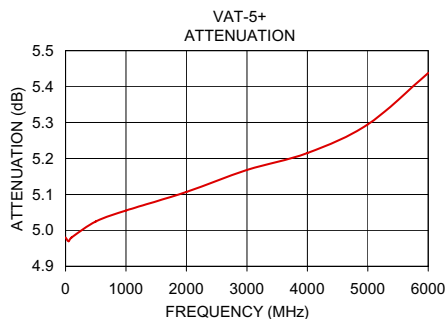
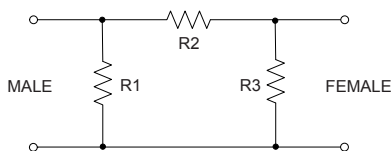
* Attenuation varies by 0.3 dB max. over temperature.

** Flatness= variation over band divided by 2.

Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
0.03	4.98	1.00
50.00	4.97	1.00
100.00	4.98	1.00
500.00	5.03	1.01
1000.00	5.06	1.02
2000.00	5.11	1.01
3000.00	5.17	1.03
4000.00	5.22	1.11
5000.00	5.30	1.24
6000.00	5.44	1.40

Electrical Schematic



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/WCLStore/terms.jsp



Typical Performance Data

FREQUENCY (MHz)	ATTENUATION (dB)	RETURN LOSS (dB)
0.03	4.98	68.75
50.00	4.97	57.94
100.00	4.98	52.92
500.00	5.03	42.82
1000.00	5.06	39.88
2000.00	5.11	43.75
3000.00	5.17	36.14
4000.00	5.22	25.39
5000.00	5.30	19.35
6000.00	5.44	15.61

REV. X1
VAT-5+
061109
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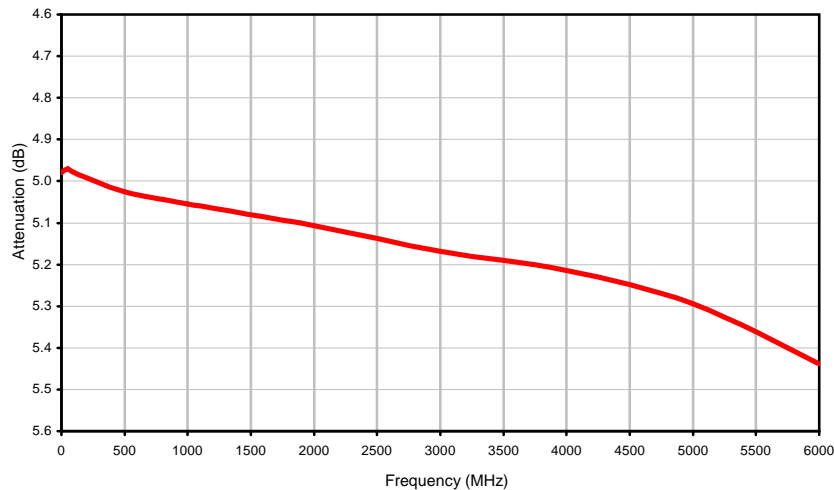


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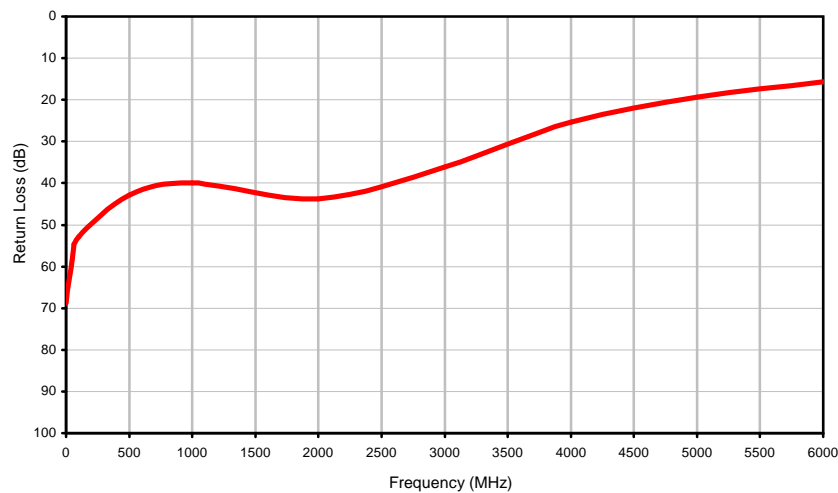


Typical Performance Curves

Attenuation



Return Loss



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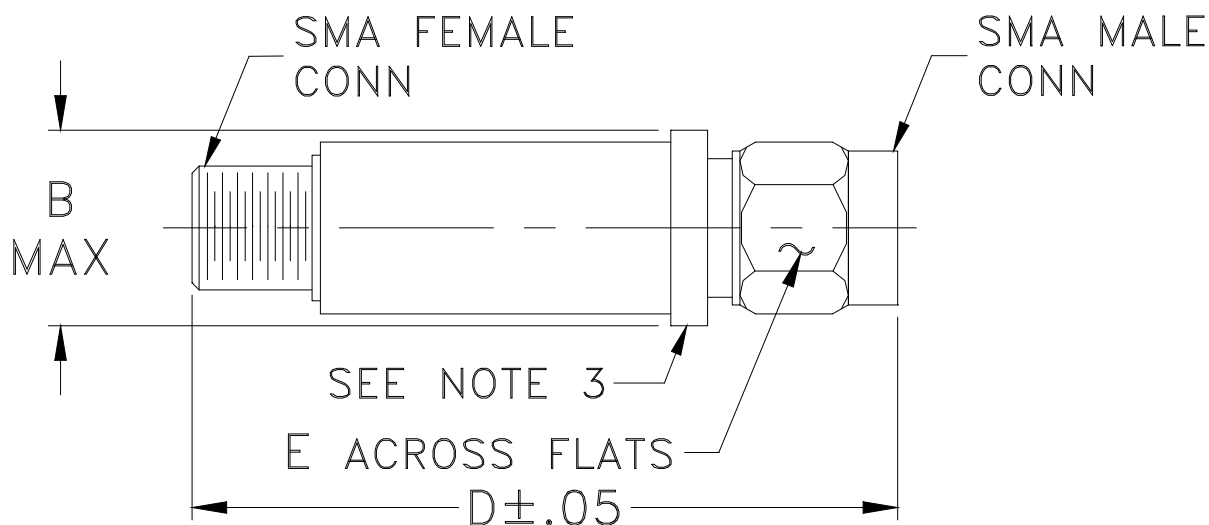


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FF704
 FF886
 FF887
 FF888
 FF969
 FF1118
 FF1145

Outline Dimensions



CASE #.	A	B	C	D	E	WT GRAMS
FF704		.410 (10.41)		1.43 (36.32)		10.0
FF886		.62 (15.75)		1.90 (48.26)		22.0
FF887		.62 (15.75)		2.24 (56.90)		26.0
FF888	--	.410 (10.41)	--	1.18 (29.97)	.312 (7.92)	7.0
FF969		.555 (14.10)		1.75 (44.45)		20.0
FF1118		.410 (10.41)		2.67 (67.82)		17.0
FF1145		.410 (10.41)		1.91 (48.51)		11.8

Dimensions are in inches (mm). Tolerances: 2Pl. ± .03; 3Pl. ± .015

Notes:

1. Case material: Stainless steel.
2. Case finish: Passivation for FF888, gold plate on all remaining case style.
3. Round Flange may have .312 Across Flats in some models.



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RF/IF MICROWAVE COMPONENTS



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