

Coaxial SMA Fixed Attenuator

50Ω 1W 10dB DC to 6000 MHz

VAT-10+
VAT-10



Maximum Ratings

Operating Temperature	-45°C to 100°C
Storage Temperature	-55°C to 100°C

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

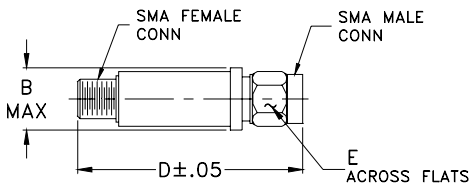
CASE STYLE: FF704

Connectors	Model	Price	Qty.
SMA	VAT-10(+)	\$11.95 ea.	(1-9)

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

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

Outline Drawing



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	10±0.3	0.10	0.20	0.15	0.35	1.05	1.25	1.20	1.60	1.90	1.0

* Attenuation varies by 0.3 dB max. over temperature.

** Flatness= variation over band divided by 2.

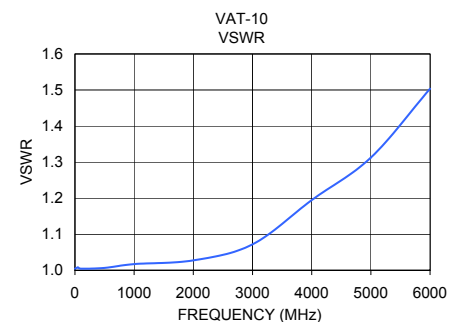
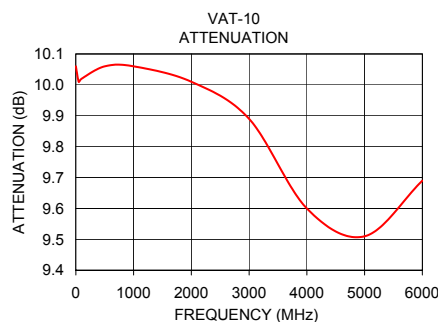
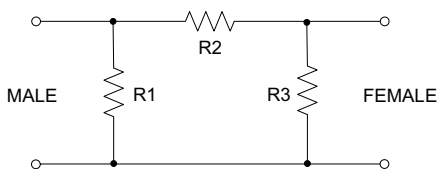
Outline Dimensions (inch/mm)

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

Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
0.03	10.06	1.00
50.00	10.01	1.01
100.00	10.02	1.00
500.00	10.06	1.01
1000.00	10.06	1.02
2000.00	10.01	1.03
3000.00	9.89	1.07
4000.00	9.60	1.19
5000.00	9.51	1.31
6000.00	9.69	1.50

Electrical Schematic



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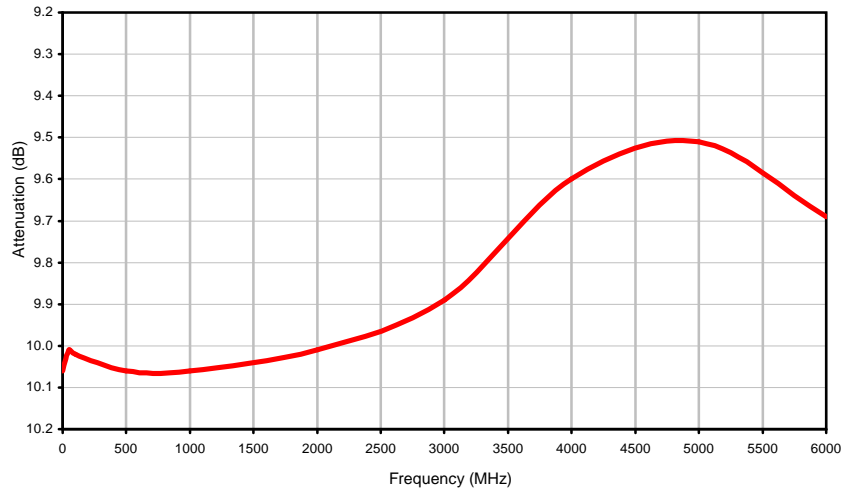
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RF/IF MICROWAVE COMPONENTS

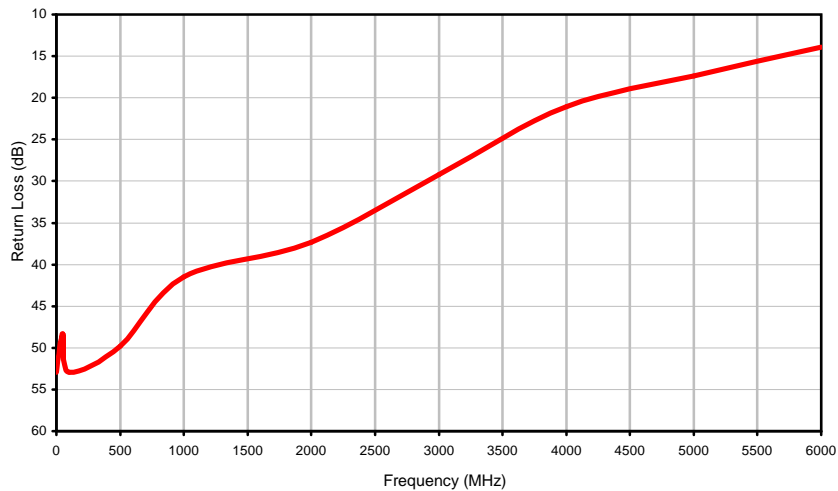
REV. E
M105218
VAT-10
LC/TD/CP/AM
070423

Typical Performance Curves

Attenuation



Return Loss



REV. X1
VAT-10+
061109
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Typical Performance Data

FREQUENCY (MHz)	ATTENUATION (dB)	RETURN LOSS (dB)
0.03	10.06	52.95
50.00	10.01	48.31
100.00	10.02	52.95
500.00	10.06	49.79
1000.00	10.06	41.46
2000.00	10.01	37.32
3000.00	9.89	29.19
4000.00	9.60	21.04
5000.00	9.51	17.38
6000.00	9.69	13.93

REV. X1
VAT-10+
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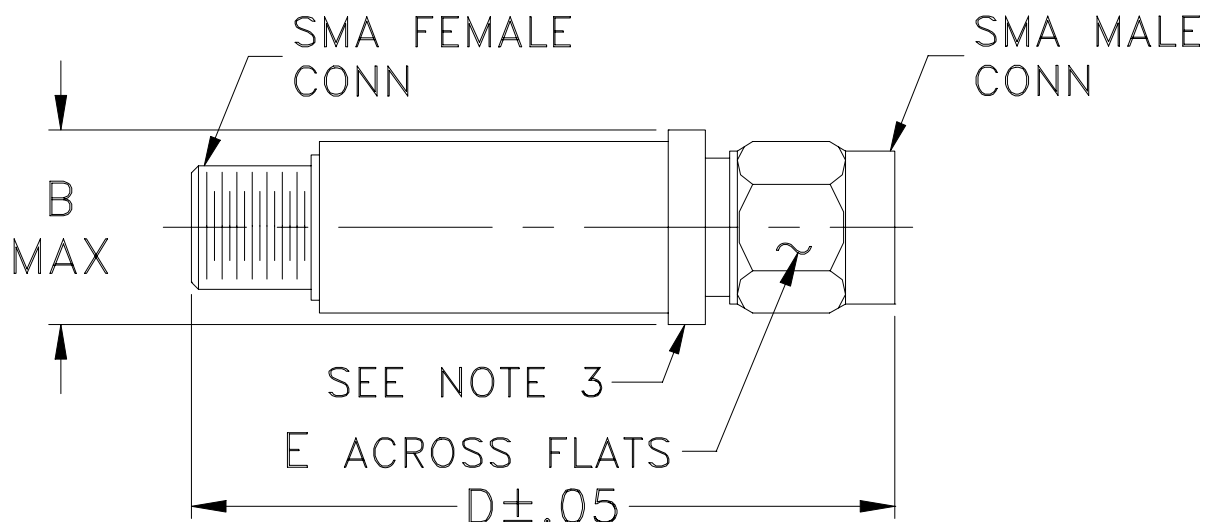


Case Style

FF

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 to 95% RH, 40°C, 96 hours; Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103, Condition B
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