

Mini Circuits 15542 SMA Attenuators



For rugged, reliable, and repeatable attenuation when accuracy is key, our customers have come to rely on Mini-Circuits Fixed.

Precision Attenuators. They feature stainless steel construction, precision attenuation from 3 to 30 dB, and SMA connectors for 50 Ω systems.

Inherent accuracy, and finely-graded attenuation levels, Mini Circuit attenuator's are invaluable on the bench or in the field. They're a ready solution for extending the range of test instrumentation or meeting circuit- and system-level requirements, such as better matching for high-VSWR components, reducing power to maximize sensitive applications, or protecting valuable circuit.

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

Coaxial

SMA Fixed Attenuator

50Ω 0.5W 30dB DC to 6000 MHz

VAT-30+



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.

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- off-the-shelf availability
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Applications

- impedance matching
- signal level adjustment

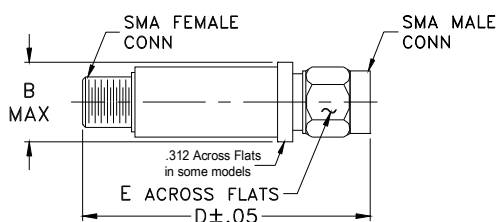
CASE STYLE: FF704

Connectors	Model	Price	Qty.
SMA	VAT-30+	\$13.95 ea.	(1-9)

+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	30±0.3	1.10	0.70	0.35	1.30	1.05	1.20	1.15	1.30	1.25	0.5

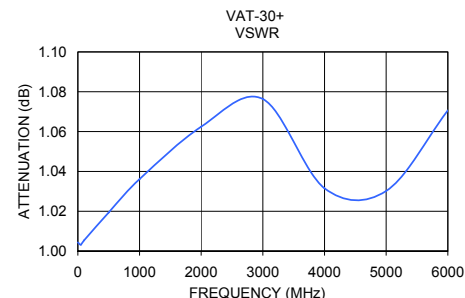
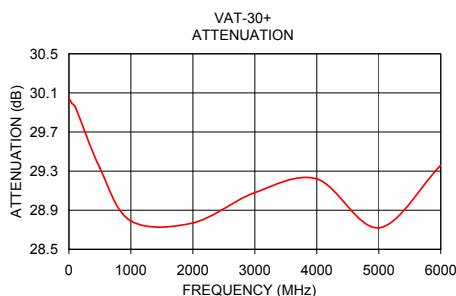
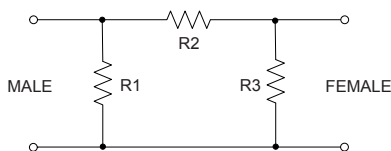
* Attenuation varies by 0.3 dB max. over temperature.

** Flatness= variation over band divided by 2.

Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
0.03	30.05	1.00
50.00	29.99	1.00
100.00	29.96	1.01
500.00	29.33	1.02
1000.00	28.79	1.04
2000.00	28.77	1.06
3000.00	29.08	1.08
4000.00	29.22	1.03
5000.00	28.72	1.03
6000.00	29.36	1.07

Electrical Schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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

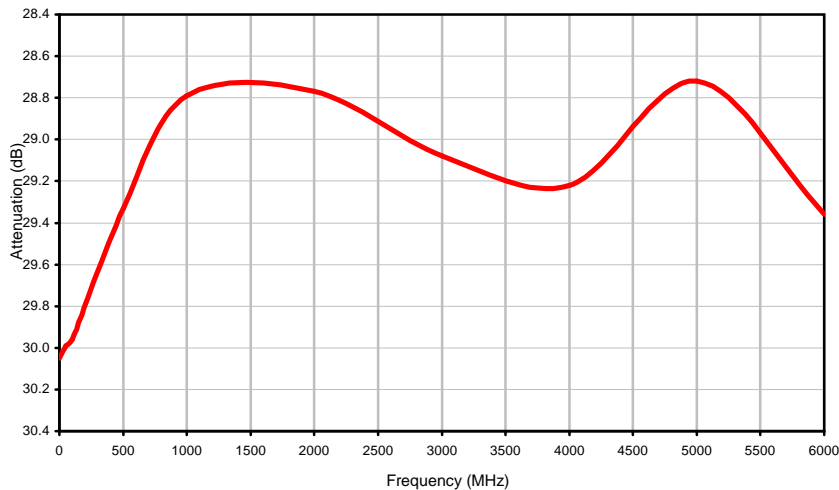
IF/RF MICROWAVE COMPONENTS

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.

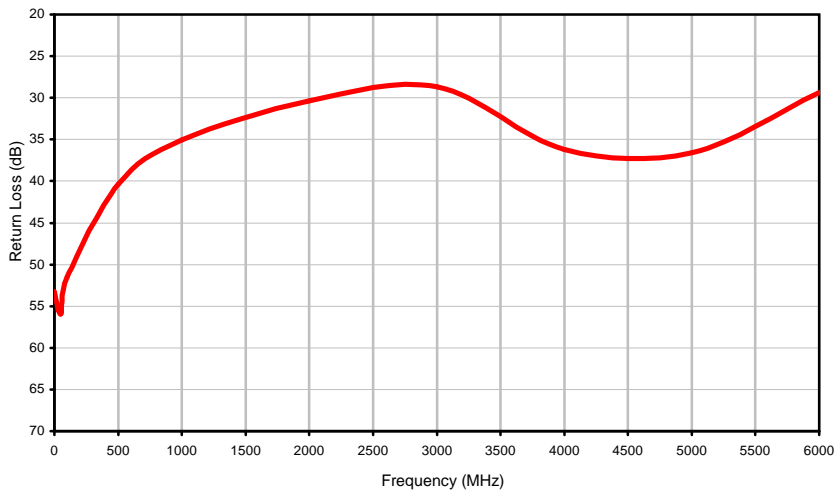
REV. G
M129173
VAT-30+
LC/TD/CP/AM
130228

Typical Performance Curves

Attenuation



Return Loss



Typical Performance Data

FREQUENCY (MHz)	ATTENUATION (dB)	RETURN LOSS (dB)
0.03	30.05	53.27
50.00	29.99	55.92
100.00	29.96	51.48
500.00	29.33	40.37
1000.00	28.79	35.02
2000.00	28.77	30.38
3000.00	29.08	28.69
4000.00	29.22	36.19
5000.00	28.72	36.56
6000.00	29.36	29.34

REV. X1
VAT-30+
061109
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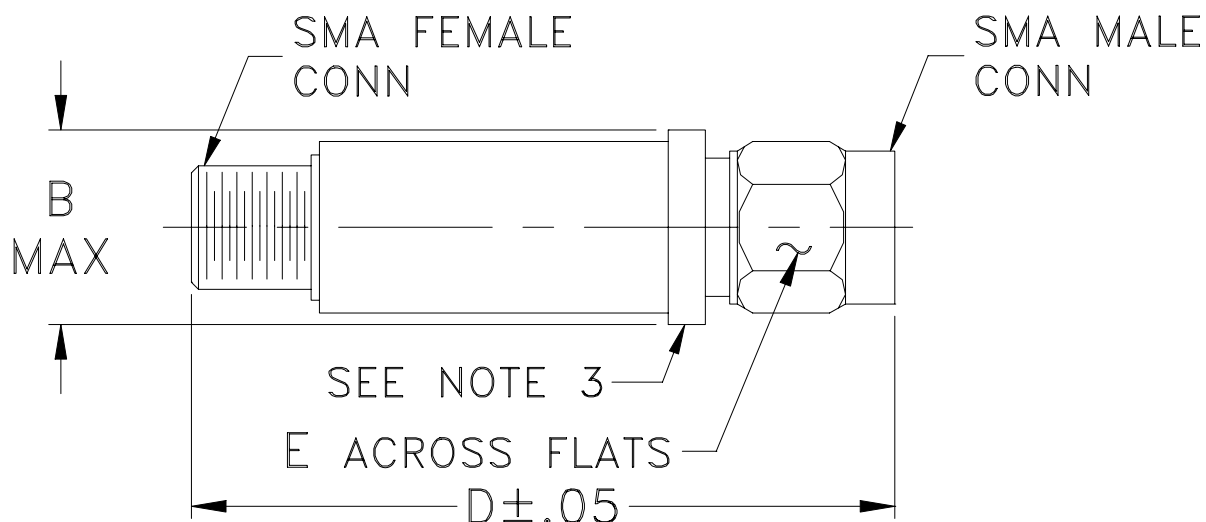


Case Style

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