Coaxial

SMA Fixed Attenuator

FW-3+

50Ω 1W 3dB DC to 12000 MHz

Generic photo used for illustration purposes only

CASE STYLE: FF704

Connectors	Model
SMA	FW-3+

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 12000 MHz
- 1 watt rating
- rugged unibody construction
- off-the-shelf availability
- very low cost

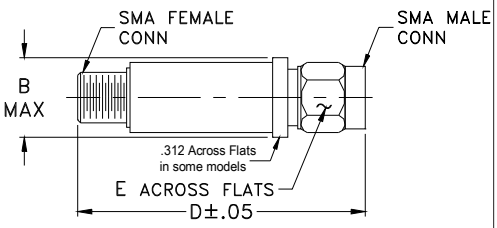
Applications

- impedance matching
- signal level adjustment

+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 at 25°C

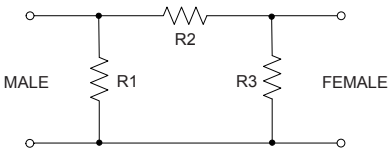
Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	—	12000	MHz
Attenuation	10	—	3	—	dB
	DC - 3000	2.8	3.15	3.5	
	3000 - 8000	3.0	3.35	3.75	
	8000 - 12000	3.25	3.6	4.05	
VSWR	DC - 3000	—	1.05	1.20	:1
	3000 - 8000	—	1.15	1.30	
	8000 - 12000	—	1.30	—	
Input Power	DC - 12000	—	—	1.0	W

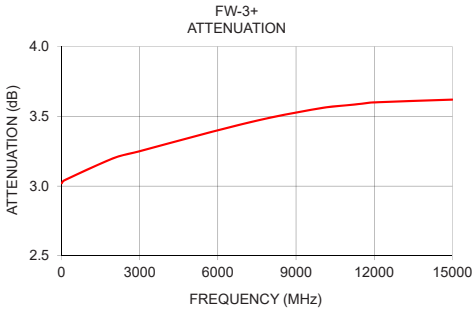
1. Flatness = variation over band divided by 2.

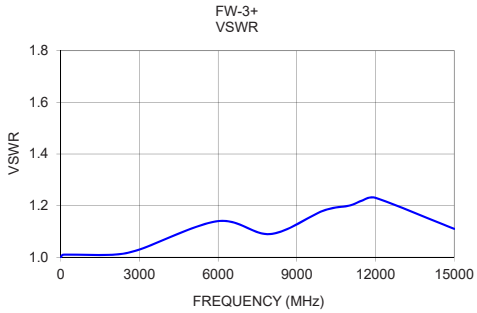
Typical Performance Data

Frequency (MHz)	Attenuation (dB)	VSWR (:1)
10.00	3.02	1.00
100.00	3.04	1.01
2000.00	3.20	1.01
3000.00	3.25	1.03
6000.00	3.40	1.14
8000.00	3.49	1.09
10000.00	3.56	1.18
11000.00	3.58	1.20
11500.00	3.59	1.22
12000.00	3.60	1.23
15000.00	3.62	1.11

Electrical Schematic







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

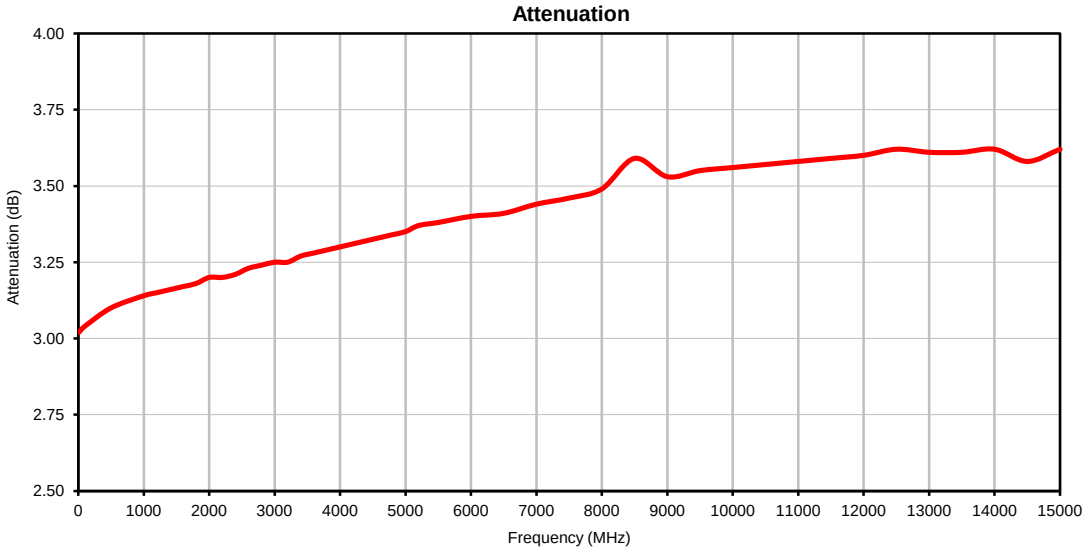
Fixed Attenuator FW-3+

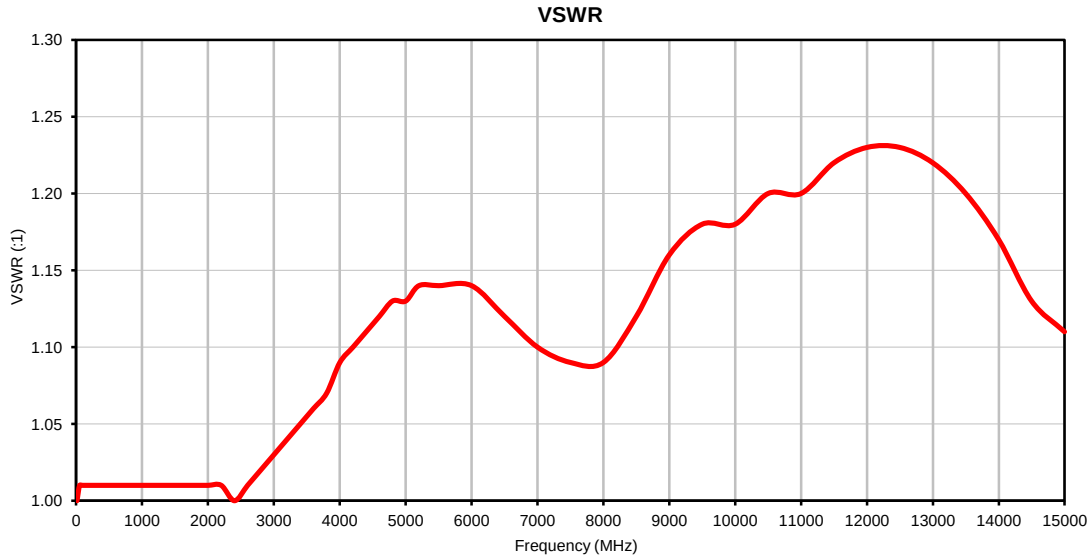
Typical Performance Data

FREQUENCY (MHz)	ATTENUATION (dB)	VSWR (:1)
10.0	3.02	1.00
50.0	3.03	1.01
100.0	3.04	1.01
500.0	3.10	1.01
1000.0	3.14	1.01
1200.0	3.15	1.01
1400.0	3.16	1.01
1600.0	3.17	1.01
1800.0	3.18	1.01
2000.0	3.20	1.01
2200.0	3.20	1.01
2400.0	3.21	1.00
2600.0	3.23	1.01
2800.0	3.24	1.02
3000.0	3.25	1.03
3200.0	3.25	1.04
3400.0	3.27	1.05
3600.0	3.28	1.06
3800.0	3.29	1.07
4000.0	3.30	1.09
4200.0	3.31	1.10
4400.0	3.32	1.11
4600.0	3.33	1.12
4800.0	3.34	1.13
5000.0	3.35	1.13
5200.0	3.37	1.14
5500.0	3.38	1.14
6000.0	3.40	1.14
6500.0	3.41	1.12
7000.0	3.44	1.10
7500.0	3.46	1.09
8000.0	3.49	1.09
8500.0	3.59	1.12
9000.0	3.53	1.16
9500.0	3.55	1.18
10000.0	3.56	1.18
10500.0	3.57	1.20
11000.0	3.58	1.20
11500.0	3.59	1.22
12000.0	3.60	1.23
12500.0	3.62	1.23
13000.0	3.61	1.22
13500.0	3.61	1.20
14000.0	3.62	1.17
14500.0	3.58	1.13
15000.0	3.62	1.11

Fixed Attenuator FW-3+

Typical Performance Curves

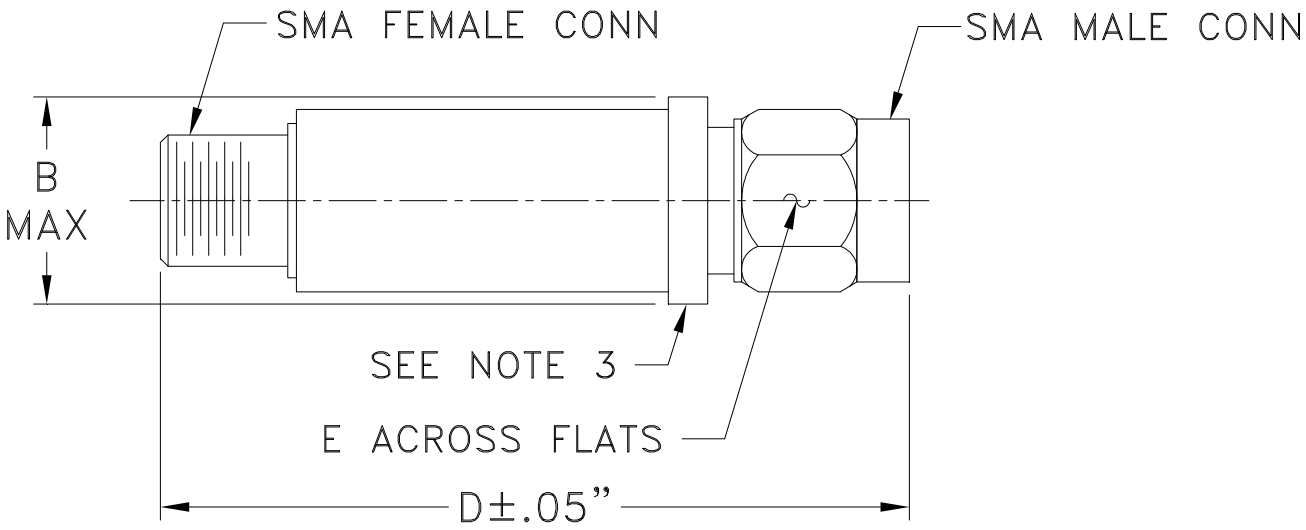




Case Style FF

FF704

Outline Dimensions



CASE #.	A	B	C	D	E	WT GRAMS
FF704	-- --	.410 (10.41)	-- --	1.43 (36.32)	.312 (7.92)	10.0

Dimensions are in inches (mm). Tolerances: 2Pl. ± .04; 3Pl. ± .030

Notes:

1. Case material: Stainless steel.
2. Case finish: Gold plated.
3. Round Flange may have .312 Across Flats in some models.

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Mini-Circuits

Environmental Specifications **ENV28T6**

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

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