

High Pass Filter

VHF-3800+

50Ω 4250 to 10000 MHz

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	7W max. at 25°C

*Passband rating, derate linearly to 3W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

Features

- Low cost
- Small size
- 5 sections
- Temperature stable
- Excellent power handling, 7W
- DC block in/out, breakdown voltage, 1kV typ.

Application

- Sub-harmonic rejection and DC blocking
- Transmitters/Receivers
- Lab use
- Instrumentation
- Test equipment

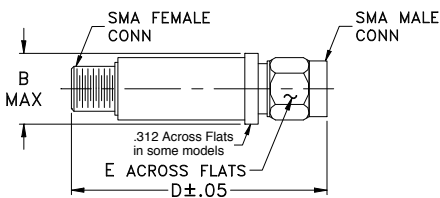


CASE STYLE: FF704
Connectors Model
SMA VHF-3800+

+RoHS Compliant

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

Outline Drawing



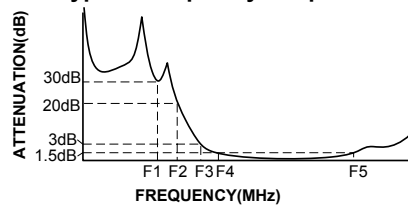
Outline Dimensions (inch mm)

B	D	E	wt.
.410	1.43	.312	grams
10.41	36.32	7.92	10

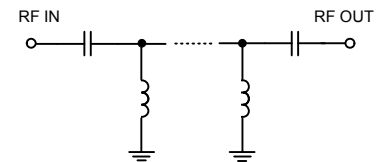
High Pass Filter Electrical Specifications (T_{AMB} = 25°C)

STOPBAND (MHz)		fco, MHz	PASSBAND (MHz)		VSWR		NO OF SECTIONS
(Loss>30dB)	(Loss>20dB)	Nom.	(Loss<1.5dB)	(Loss<2dB)	Typ.	Frequency (MHz)	
Typ.	Min.	Typ.	Max.	Max.	Stopband	Frequency	
DC-F1	DC-F2	F3	F4-F5			1.5:1	
DC-3100	DC-3200	3800	4500-9000	4250-10000	20:1	3950-10000	5

Typical Frequency Response



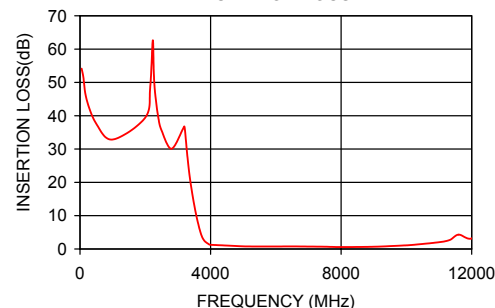
Electrical schematic



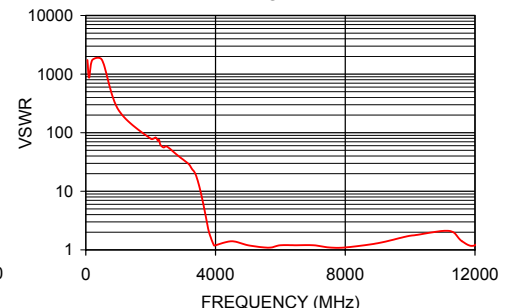
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	54.14	1737.18
500	37.58	1737.18
1500	32.52	108.58
3100	33.38	31.60
3200	36.68	28.03
3400	19.19	18.90
3550	10.63	9.33
3800	2.59	2.00
3950	1.41	1.16
4250	1.14	1.45
4500	1.02	1.43
7000	0.72	1.22
9000	0.68	1.28
10000	1.13	1.70
11330	2.71	1.96
12000	3.15	1.70

VHF-3800+
INSERTION LOSS



VHF-3800+
VSWR



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-Circuits' 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



Coaxial High Pass Filter

VHF-3800+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS @ +25° C (dB)	INPUT RETURN LOSS @ +25° C (dB)	OUTPUT RETURNLOSS @ +25° C (dB)
40	59.29	0.00	0.01
50	60.64	0.02	0.02
100	50.99	0.01	0.01
200	45.91	0.01	0.02
500	38.35	0.01	0.04
1000	33.89	0.06	0.07
1500	33.98	0.13	0.13
2000	43.63	0.21	0.20
2500	34.18	0.27	0.36
3000	30.77	0.47	0.55
3100	34.40	0.51	0.58
3200	37.60	0.62	0.71
3400	18.33	0.96	1.11
3500	12.86	1.41	1.51
3550	10.69	1.77	1.97
3800	2.87	7.86	8.10
3950	1.44	16.11	16.76
4000	1.24	20.46	21.77
4250	0.87	24.22	25.58
4500	0.76	24.61	27.42
5000	0.65	21.19	21.86
5500	0.69	15.13	15.38
6000	0.70	13.44	13.43
6500	0.72	13.55	13.31
7000	0.75	15.71	14.54
7500	0.60	19.23	18.91
8000	0.52	25.08	27.46
8500	0.55	20.69	21.11
9000	0.69	15.00	14.94
9500	0.88	11.74	11.61
10000	1.15	9.61	9.57
10500	1.42	8.47	8.24
11000	1.80	8.52	7.47
11330	2.72	11.16	6.61
11500	3.91	19.59	6.08
12000	3.59	13.57	10.91
12500	5.71	5.24	4.15
13000	2.97	7.50	5.73
13500	2.13	17.50	8.86
14000	3.22	8.77	6.35
14500	6.95	3.14	2.54

REV. X1
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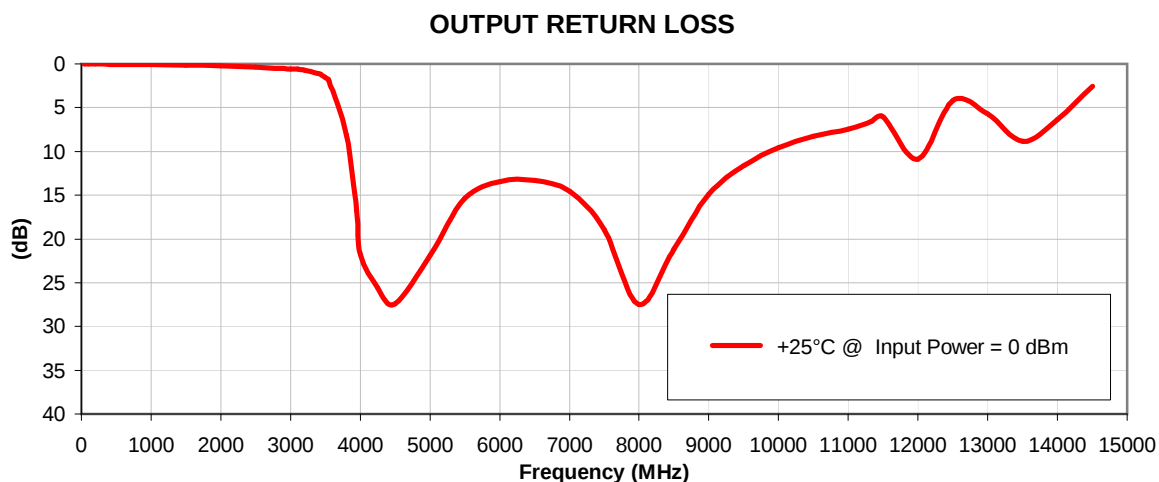
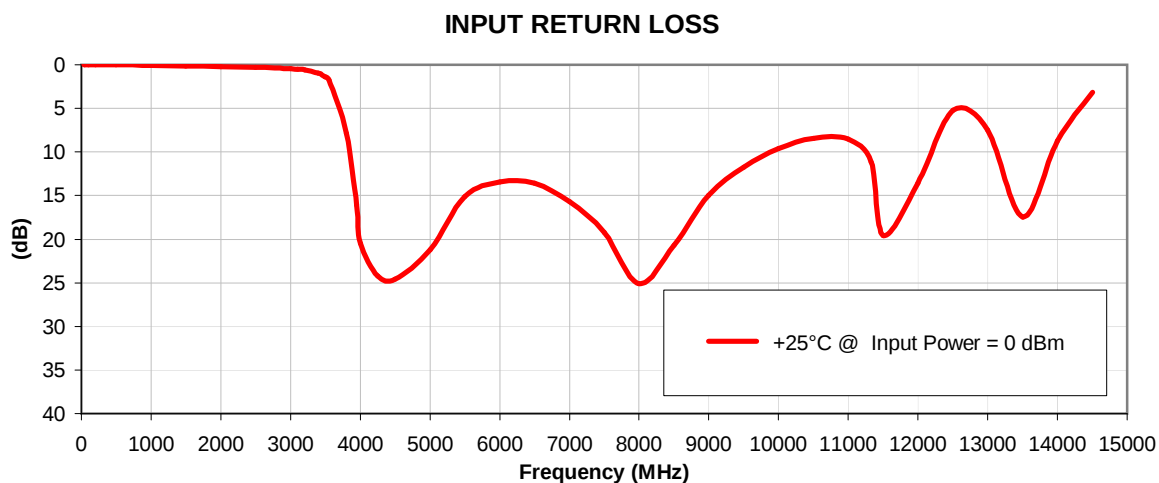
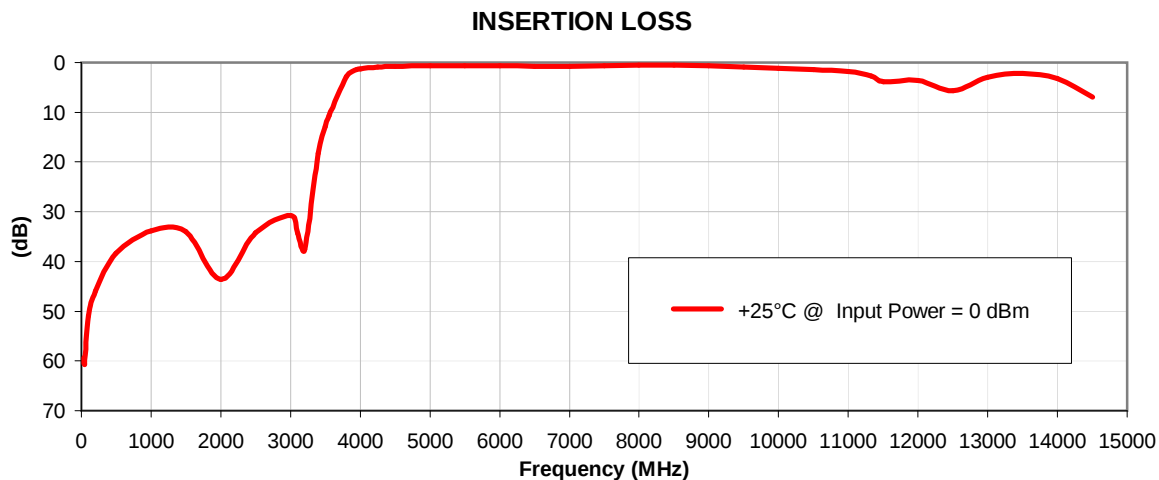


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The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see

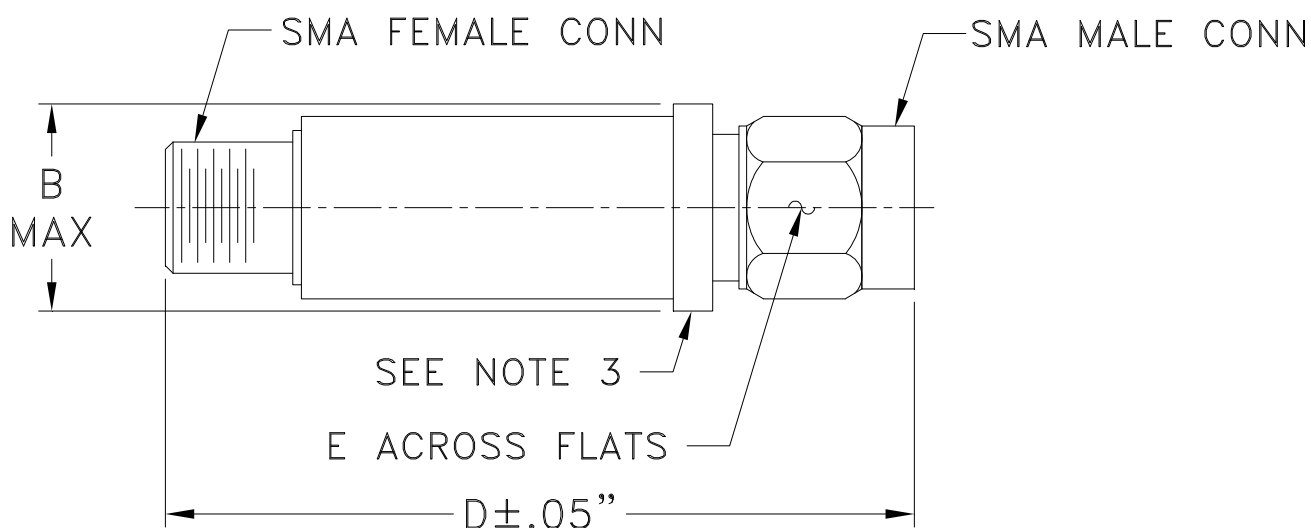
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Typical Performance Curves



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. $\pm .04$; 3Pl. $\pm .030$

Notes:

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



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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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	-55° 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