

High Pass Filter

VHF-5500+

50Ω 6000 to 11500 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



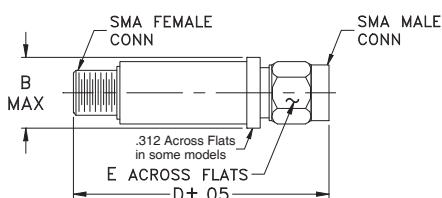
CASE STYLE: FF704

Connectors	Model
SMA	VHF-5500+

+RoHS Compliant

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

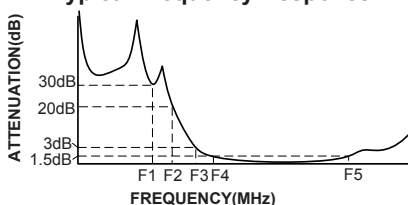
Outline Drawing



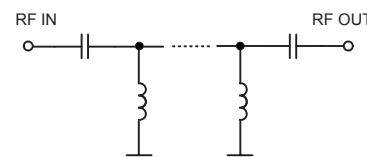
High Pass Filter Electrical Specifications (T_{AMB} = 25°C)

STOPBAND (MHz)		f _{co} , MHz	PASSBAND (MHz)		VSWR		NO. OF SECTIONS
(Loss>30dB)	(Loss>20dB)	Nom.	(Loss<1.5dB)	(Loss<2dB)	Typ.	Frequency (MHz)	
Typ. DC-F1	Min. DC-F2	Typ. F3	Max. F4-F5	Max.	Stopband	Frequency	
DC-4000	DC-4500	5500	6600-10000	6000-11500	20:1	5600-11000	5

Typical Frequency Response



Electrical Schematic



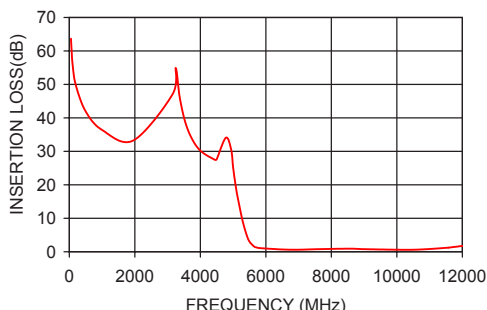
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	63.32	1737.18
500	41.73	868.59
1000	36.12	434.30
3250	44.07	62.05
4000	32.16	45.72
4500	27.90	34.75
5000	26.03	22.29
5500	3.24	2.44
5600	2.05	1.53
6000	1.39	1.53
6600	1.05	1.22
9000	1.09	1.60
10000	0.79	1.24
11500	1.18	1.64
12000	1.71	2.05

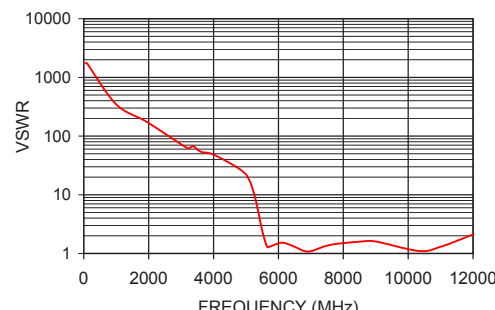
Outline Dimensions (inch/mm)

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

VHF-5500+ INSERTION LOSS



VHF-5500+ VSWR



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/MCLStore/terms.jsp



Coaxial High Pass Filter

VHF-5500+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS @ +25° C (dB)	INPUT RETURN LOSS @ +25° C (dB)	OUTPUT RETURNLOSS @ +25° C (dB)
38	68.13	0.02	0.02
50	63.67	0.01	0.01
500	41.84	0.00	0.01
1000	36.39	0.04	0.07
3250	55.00	0.27	0.27
4000	30.11	0.34	0.29
4500	27.68	0.44	0.40
5000	24.67	0.77	0.73
5500	3.10	7.54	7.63
5600	1.79	14.06	14.69
6000	0.98	15.75	15.98
6600	0.66	27.41	29.08
9000	0.80	13.14	12.98
11000	0.81	13.59	13.50
11500	1.17	9.49	9.58
12000	1.72	6.94	7.21
12500	2.25	5.43	5.70
13000	2.70	4.56	4.55
13500	3.03	4.09	3.97
14000	3.15	4.17	3.88
14282	3.08	4.43	4.12
14500	2.86	4.87	4.49
14750	2.52	5.73	5.30
15000	2.11	7.39	6.75
15250	1.72	11.06	9.73
15500	1.62	22.67	14.17
15750	2.36	11.63	9.94
16000	4.39	5.76	5.55
16250	6.39	3.60	4.23
16500	8.41	2.30	2.32
16750	11.71	1.47	1.37
17000	15.74	1.04	0.98
17250	21.33	0.85	0.83
17500	25.88	0.86	0.94
17750	18.22	1.35	1.93
18000	23.94	0.96	1.16
18250	23.49	0.81	0.84
18500	18.98	0.87	0.87
18750	15.95	1.02	0.91
19000	13.65	1.17	1.04
19300	11.84	1.44	1.14

REV. X1
VHF-5500+
071011
Page 1 of 1



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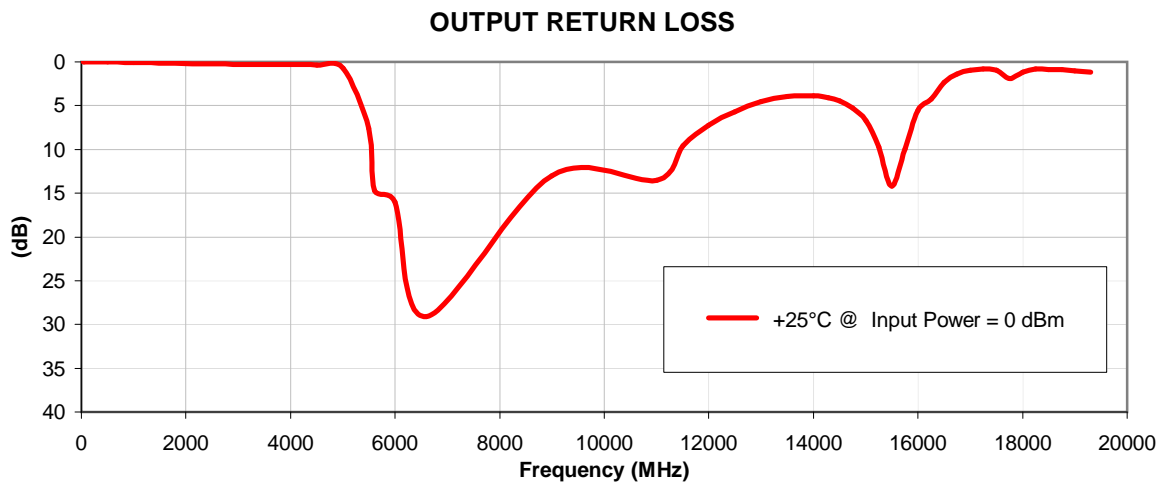
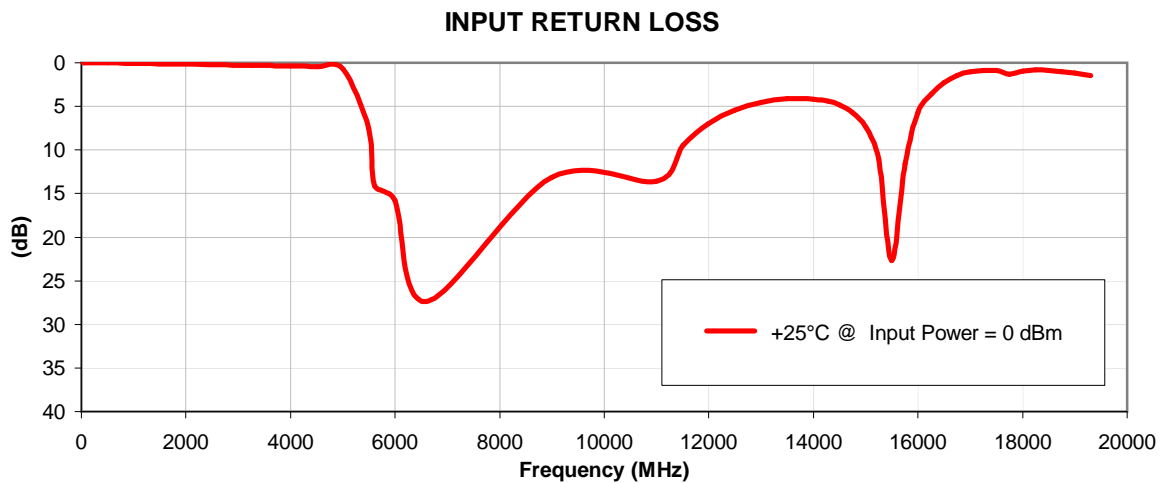
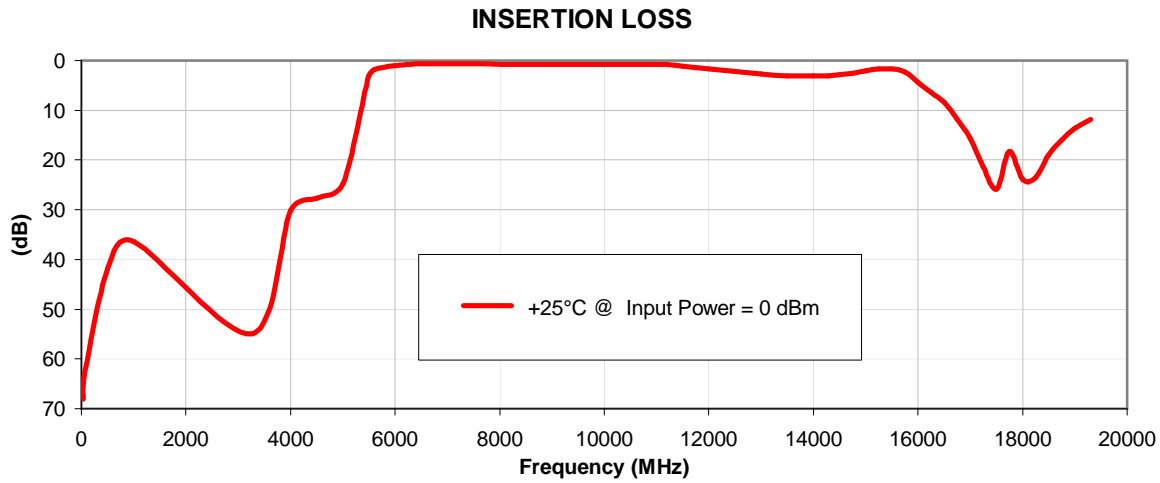
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Coaxial High Pass Filter

VHF-5500+

Typical Performance Curves



REV. X1
VHF-5500+
071011
Page 1 of 1



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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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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