

High Pass Filter

50Ω 6300 to 15000 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

- Rugged uni-body construction, small size
- 5 sections
- Temperature stable
- Excellent power handling, 7W
- Low cost

Applications

- Point to point radio
- Sub-harmonic rejection and DC blocking
- Transmitters/Receivers
- Lab use

VHF-6010+



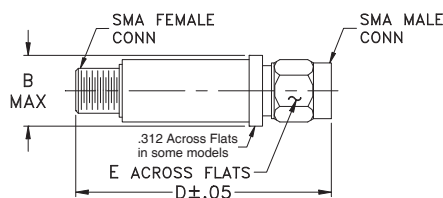
CASE STYLE: FF704

Connectors	Model
SMA	VHF-6010+

+RoHS Compliant

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

Outline Drawing



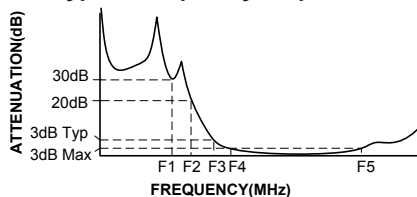
Outline Dimensions (inch mm)

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

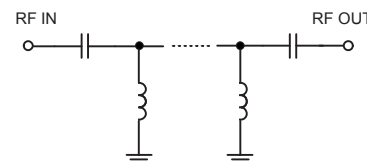
High Pass Filter Electrical Specifications (T_{AMB} = 25°C)

STOPBAND (MHz)		f _{co} , MHz	PASSBAND (MHz)		VSWR		NO. OF SECTIONS
(Loss>30dB)	(Loss>20dB)	Nom.	(Loss<3dB)	(Loss<5dB)	Typ.	Frequency	
Typ. DC-F1	Min. DC-F2	Typ. F3	Max. F4-F5	Max.	Stopband	1.5:1	
DC-5190	DC-5200	6010	6350-13000	6300-15000	20:1	6050-8000	5

Typical frequency response

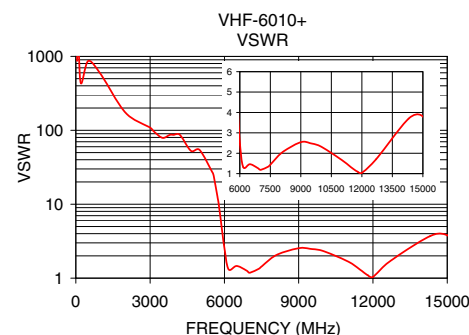
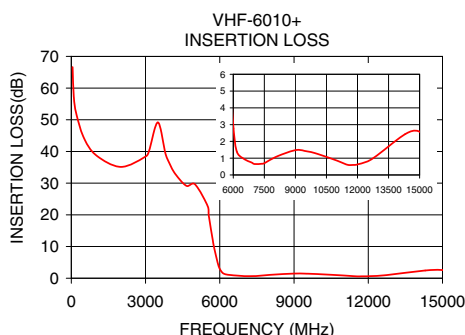


Electrical schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	66.62	868.59
500	44.39	868.59
1000	38.81	579.06
2000	35.11	173.72
5190	34.48	48.85
5200	35.02	52.33
5500	22.93	27.59
5725	11.59	12.35
5870	6.09	5.58
6010	2.78	2.42
6050	2.21	1.98
6300	1.12	1.31
6350	1.05	1.37
8000	1.03	1.95
10000	1.28	2.32
13000	1.20	2.07
15000	2.58	3.80



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



Coaxial High Pass Filter

VHF-6010+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS @ +25° C (dB)	INPUT RETURN LOSS @ +25° C (dB)	OUTPUT RETURNLOSS @ +25° C (dB)
50	66.62	0.04	0.02
100	57.34	0.02	0.01
200	51.93	0.03	0.04
500	44.39	0.01	0.02
1000	38.81	0.03	0.03
2000	35.11	0.12	0.10
3000	38.41	0.19	0.16
3150	40.42	0.26	0.18
3500	49.18	0.25	0.22
3800	39.46	0.25	0.20
3950	36.49	0.22	0.20
4200	32.92	0.28	0.20
4650	29.17	0.31	0.33
5000	29.64	0.40	0.32
5500	22.93	0.75	0.63
5560	19.43	0.88	0.70
5725	11.59	1.63	1.41
5770	9.69	2.02	1.73
5920	4.72	4.85	4.35
6010	2.78	8.56	7.64
6170	1.40	25.78	17.32
6500	0.97	15.06	14.54
6900	0.73	20.20	18.69
7025	0.65	25.06	21.44
7400	0.67	18.19	16.67
7500	0.70	16.02	14.91
8100	1.10	9.64	9.24
9000	1.48	7.68	7.23
9500	1.42	7.53	7.42
10000	1.28	8.01	8.00
11000	0.86	11.69	11.94
11500	0.61	17.46	18.02
11790	0.60	24.34	26.85
12000	0.63	27.45	34.14
12700	0.95	11.27	11.71
14300	2.43	4.90	4.82
15000	2.58	4.92	4.68

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VHF-6010+
090916
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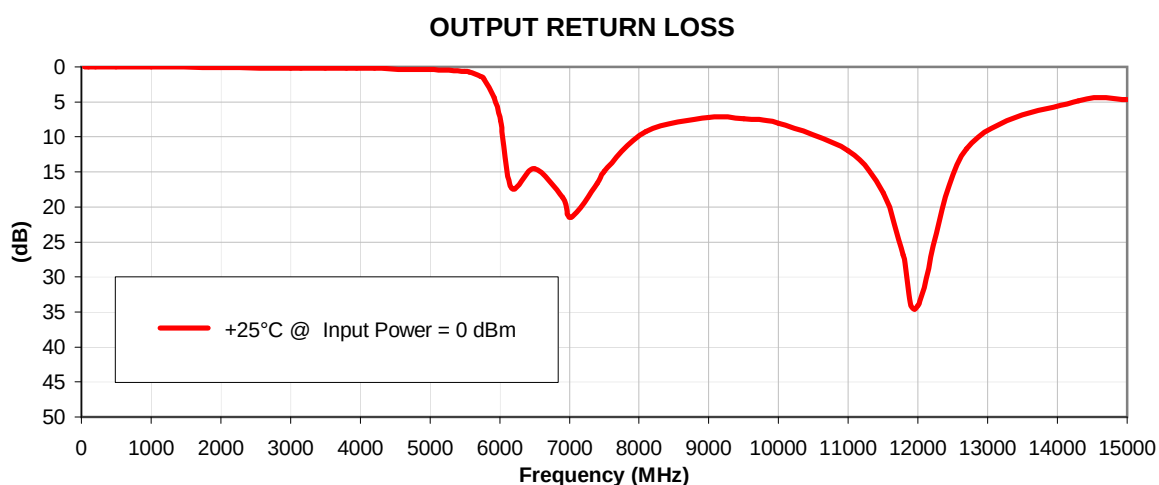
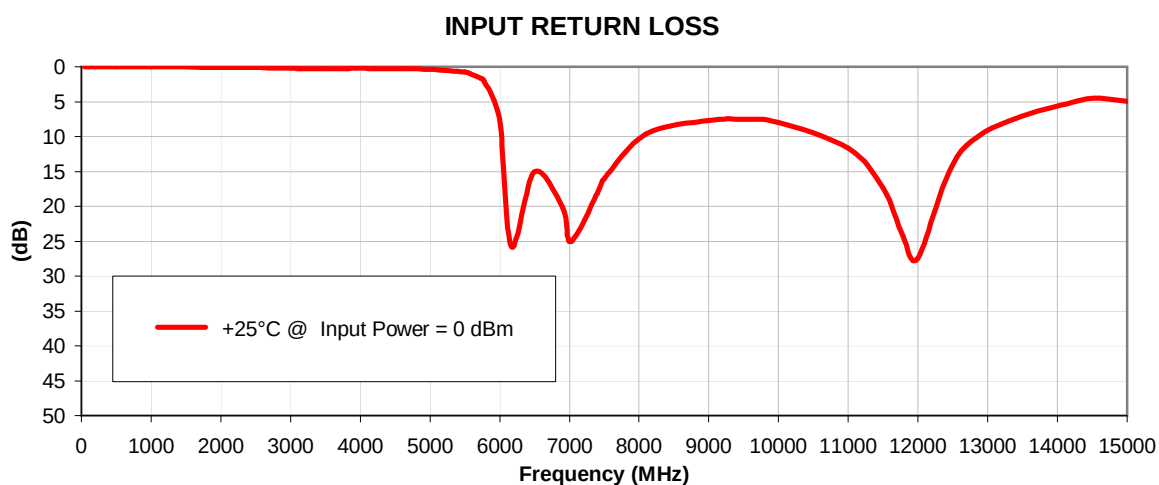
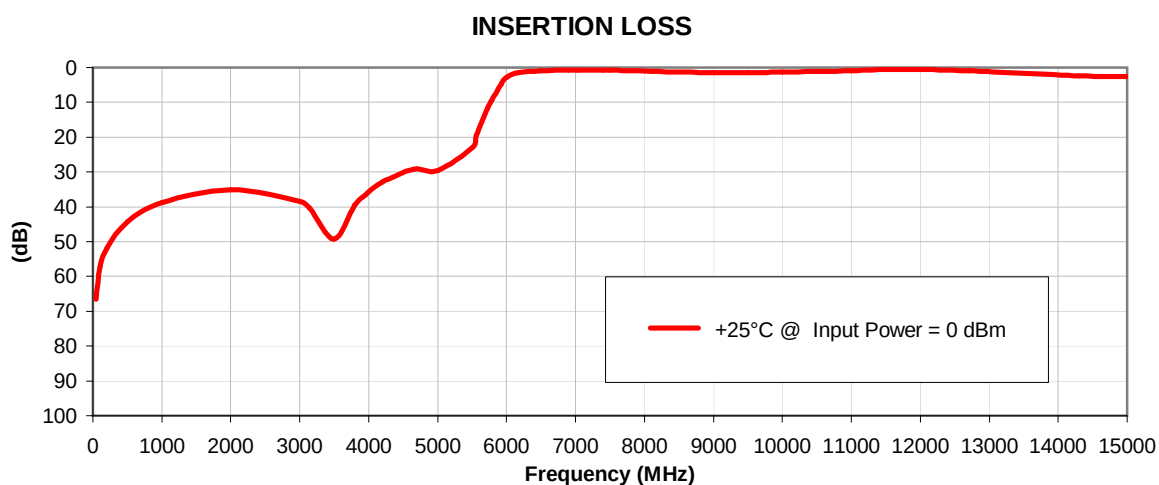
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Coaxial High Pass Filter

VHF-6010+

Typical Performance Curves



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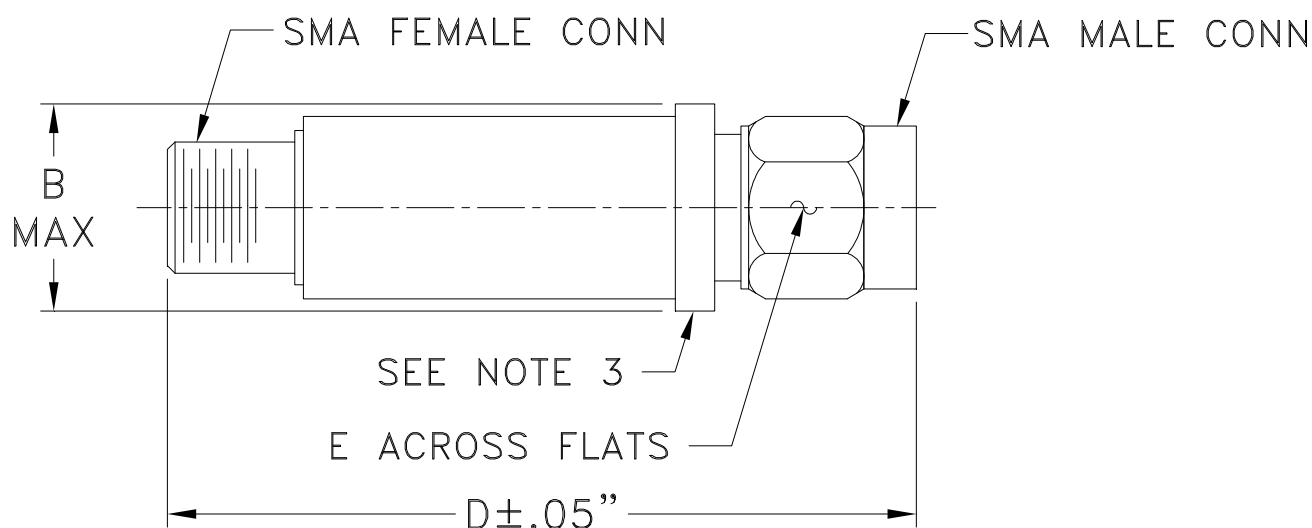


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Outline Dimensions



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