Coaxial

High Pass Filter

VHF-1760+

50Ω 1900 to 5500 MHz



Generic photo used for illustration purposes only

CASE STYLE: FF704

Connectors	Model
SMA	VHF-1760+

+RoHS Compliant

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

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.

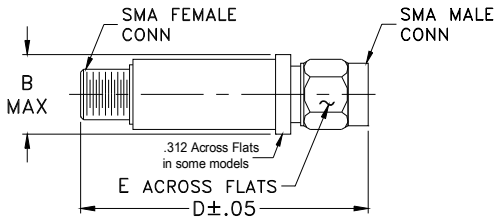
Features

- rugged unibody construction, small size
- 7 sections
- temperature stable
- excellent power handling, 7W
- low cost

Applications

- sub-harmonic rejection
- transmitters/receivers
- lab use

Outline Drawing



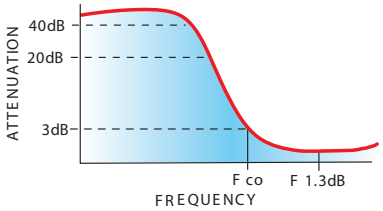
Outline Dimensions (inch / mm)

B	D	E	wt
.410	1.43	.312	grams
10.41	36.32	7.92	10.0

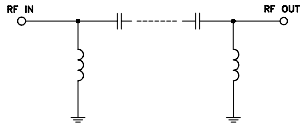
Electrical Specifications (T_{AMB}=25°C)

STOP BAND (MHz) Min. (loss > 40 dB)	STOP BAND (MHz) Min. (loss > 20 dB)	fco, MHz Nom. (loss 3 dB) Typ.	PASSBAND (MHz) (loss < 1.3 dB) Max.	PASSBAND (MHz) (loss < 2 dB) Typ.	VSWR (:1) Typ. Stopband	VSWR (:1) Typ. Frequency (MHz) 1.5:1	NO. OF SECTIONS
950	1230	1760	2100-5200	1900-5500	20:1	2200-4500	7

typical frequency response

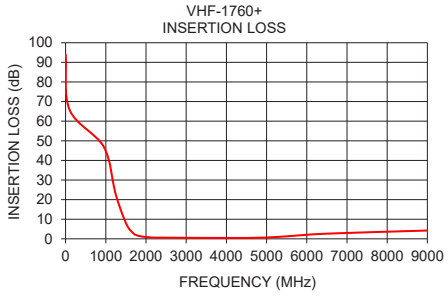


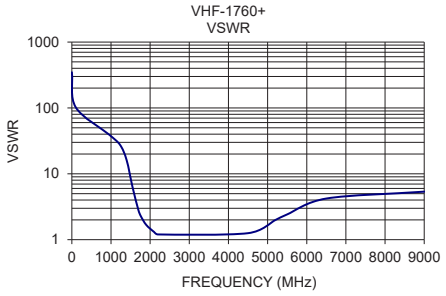
electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1	94.01	347.44
100	65.74	102.19
950	46.94	39.49
1230	24.02	27.59
1400	13.23	16.11
1550	6.08	6.30
1700	2.57	2.82
1760	1.91	2.29
1900	1.17	1.68
2100	0.77	1.31
2200	0.65	1.20
4500	0.45	1.26
5200	0.92	1.99
5500	1.29	2.42
6500	2.66	4.22
9000	4.25	5.36





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-1760+

Typical Performance Data

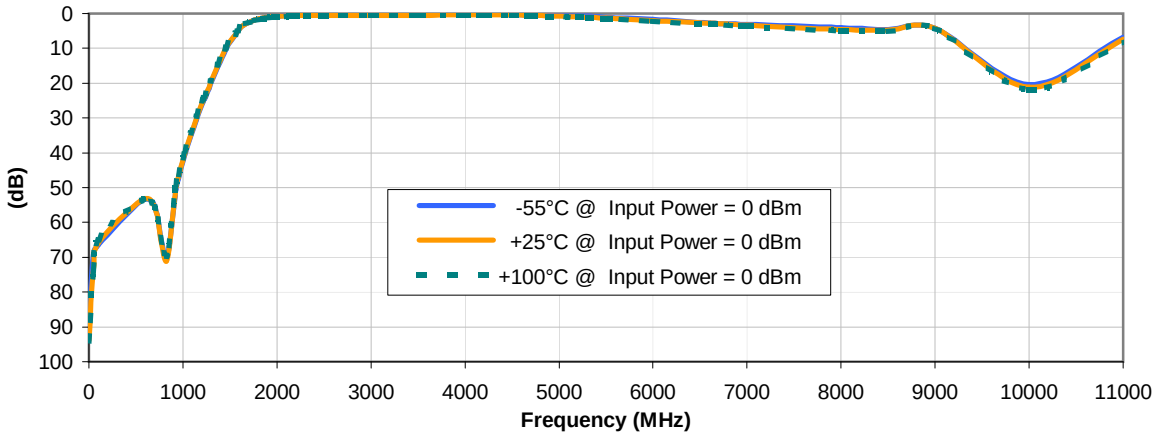
FREQ. (MHz)	INSERTION LOSS (dB)			INPUT RETURN LOSS (dB)			OUTPUT RETURNLOSS (dB)		
	@ -55° C	@ +25° C	@ +100° C	@ -55° C	@ +25° C	@ +100° C	@ -55° C	@ +25° C	@ +100° C
1	89.74	94.01	94.07	0.02	0.05	0.06	0.00	0.05	0.03
50	69.39	73.61	73.65	0.10	0.13	0.13	0.08	0.13	0.11
100	66.31	65.74	64.88	0.15	0.17	0.18	0.11	0.15	0.17
565	53.72	53.58	53.63	0.26	0.33	0.40	0.22	0.31	0.36
700	55.30	55.59	55.50	0.28	0.36	0.42	0.24	0.35	0.39
825	70.40	71.13	69.83	0.31	0.40	0.48	0.28	0.38	0.45
925	50.61	49.90	49.17	0.33	0.43	0.52	0.31	0.42	0.50
950	47.50	46.94	46.28	0.34	0.44	0.53	0.32	0.43	0.51
1020	40.51	40.01	39.49	0.35	0.45	0.55	0.34	0.46	0.54
1145	30.53	30.06	29.67	0.40	0.53	0.65	0.41	0.56	0.66
1215	25.55	25.11	24.73	0.45	0.61	0.71	0.46	0.64	0.74
1230	24.49	24.02	23.68	0.47	0.63	0.76	0.48	0.64	0.75
1370	15.35	15.00	14.70	0.75	0.95	1.12	0.78	1.00	1.17
1460	10.26	10.00	9.74	1.28	1.54	1.81	1.31	1.58	1.82
1585	4.98	4.92	4.81	3.10	3.47	3.88	3.11	3.48	3.87
1670	2.97	3.00	3.01	5.18	5.59	6.07	5.15	5.60	6.05
1760	1.82	1.91	1.98	7.71	8.13	8.57	7.65	8.07	8.51
1850	1.24	1.35	1.46	10.21	10.60	10.98	10.09	10.47	10.81
1900	1.03	1.17	1.27	11.51	11.93	12.27	11.39	11.78	12.09
1970	0.83	0.97	1.10	13.15	13.75	14.04	13.02	13.51	13.76
2100	0.64	0.77	0.88	16.49	17.40	17.99	16.07	16.76	17.13
2150	0.57	0.69	0.81	17.99	19.04	19.85	17.60	18.34	18.78
2200	0.53	0.65	0.76	19.68	20.74	21.88	19.18	19.95	20.50
2300	0.43	0.57	0.67	23.61	24.84	26.64	22.26	23.02	23.63
3000	0.36	0.49	0.60	17.36	17.50	17.85	17.31	17.36	17.55
3500	0.31	0.46	0.55	18.21	18.22	18.66	18.06	18.01	18.23
4000	0.23	0.38	0.51	29.21	28.67	29.04	26.08	25.50	25.32
4200	0.22	0.39	0.52	29.26	30.33	30.13	25.54	25.40	24.95
4500	0.28	0.45	0.58	19.47	18.90	18.58	18.78	18.14	17.69
4700	0.35	0.52	0.67	15.59	15.06	14.81	15.17	14.71	14.33
5200	0.66	0.92	1.11	10.11	9.59	9.47	9.94	9.48	9.32
5300	0.79	1.04	1.24	9.34	8.90	8.80	9.16	8.78	8.64
5500	1.02	1.29	1.51	7.87	7.63	7.59	7.65	7.51	7.44
6000	1.72	1.98	2.20	5.44	5.51	5.63	5.32	5.42	5.51
6610	2.68	2.83	3.04	3.78	4.02	4.24	3.67	3.92	4.15
7000	3.07	3.35	3.63	3.30	3.37	3.51	3.20	3.31	3.48
8000	4.04	4.53	5.02	2.51	2.47	2.37	2.43	2.43	2.43
8500	4.56	4.81	5.17	2.15	2.36	2.40	2.15	2.36	2.41
9000	4.27	4.25	4.30	2.62	3.28	3.98	2.57	3.14	3.59
10000	20.37	21.08	21.94	0.81	1.11	1.53	0.64	1.03	1.29
11000	6.75	7.36	8.09	2.51	2.36	2.30	5.35	4.00	3.45

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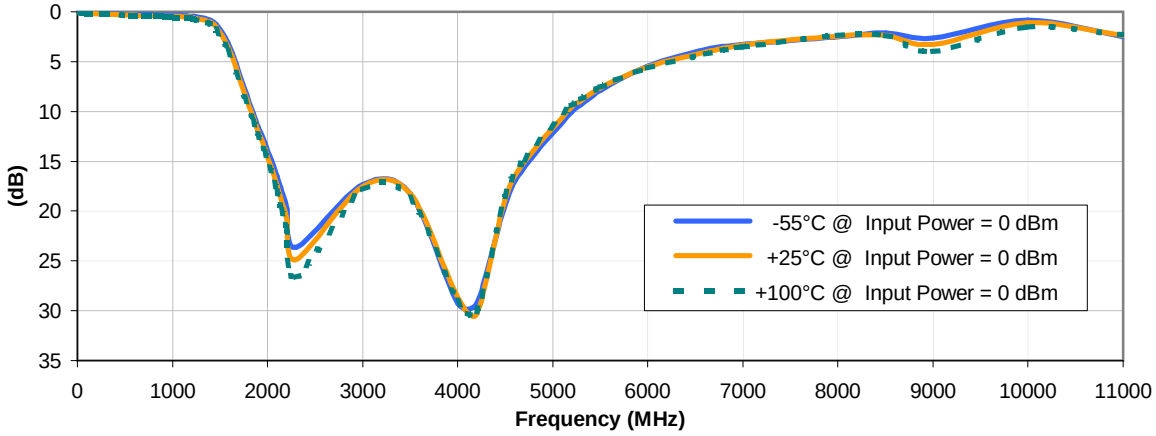
Coaxial High Pass Filter VHF-1760+

Typical Performance Curves

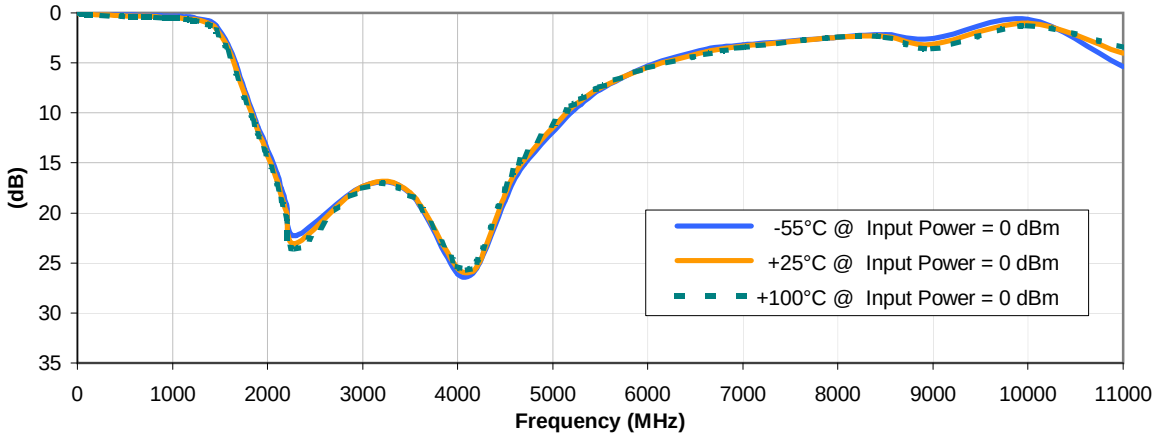
INSERTION LOSS vs. TEMPERATURE



INPUT RETURN LOSS vs. TEMPERATURE



OUTPUT RETURN LOSS vs. TEMPERATURE

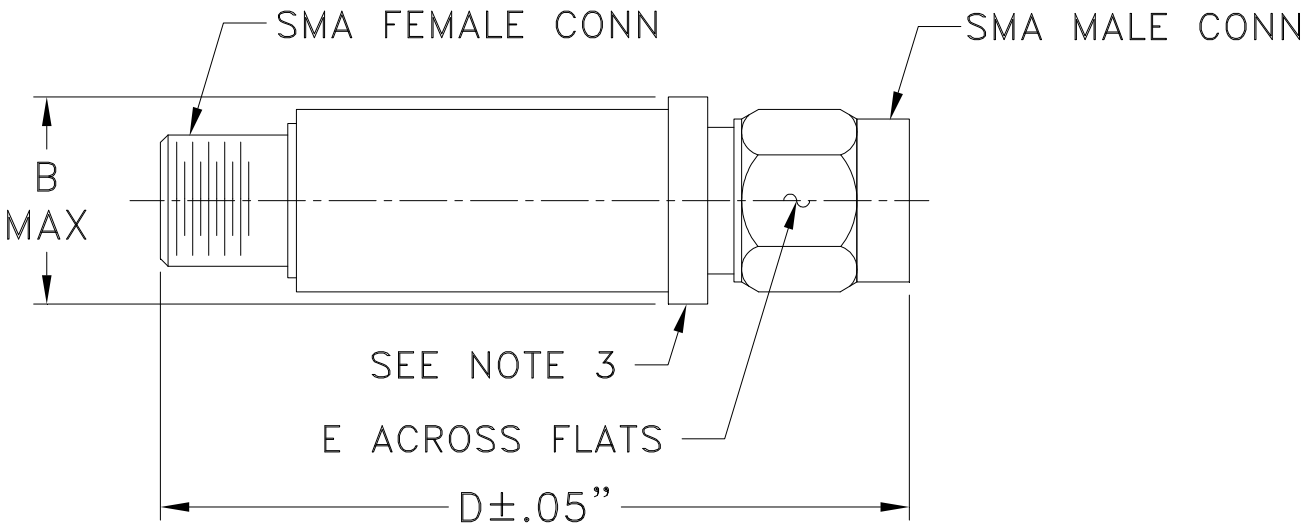


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Case Style FF

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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Environmental Specifications ENV28

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

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