

Coaxial High Pass Filter

50Ω 2200 to 6000 MHz

VHF-2100+



Generic photo used for illustration purposes only

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

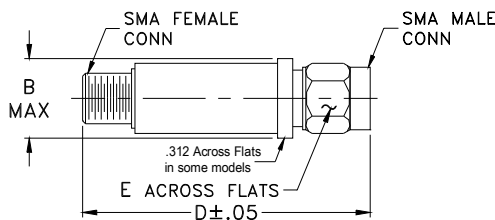
CASE STYLE: FF704

Connectors	Model
SMA	VHF-2100+

+RoHS Compliant

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

Outline Drawing



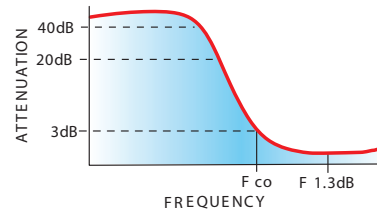
Outline Dimensions (inch/mm)

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

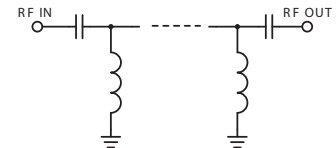
Electrical Specifications (T_{AMB} = 25°C)

STOP BAND (MHz) Min.	f _{co} , MHz Nom.	PASSBAND (MHz)		VSWR (:1) Typ.	NO. OF SECTIONS
		(loss < 1.3 dB)	(loss < 2 dB)		
(loss > 40 dB)	(loss > 20 dB)	Typ.	Max.	Typ.	
1050	1530	2100	2500-5000	2200-6000	20:1
					2400-5200

typical frequency response

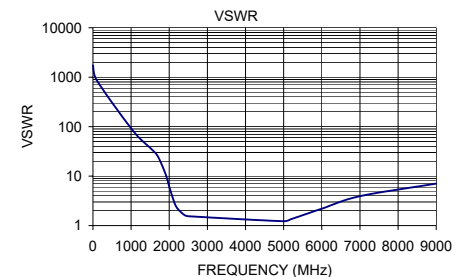


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1	87.12	1737.18
100	70.11	868.59
1050	47.19	82.73
1530	25.96	35.46
1700	18.32	25.19
1900	9.49	11.24
2000	5.80	6.21
2100	3.28	3.47
2200	1.97	2.29
2400	1.14	1.63
2500	1.01	1.55
5000	0.45	1.23
5200	0.51	1.35
6000	1.11	2.20
7000	2.43	3.94
9000	4.57	7.08



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



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

REV. H
M151107
VHF-2100+
EDR-6437/5
RVN/AD/AM
200520
Page 1 of 1

Coaxial High Pass Filter

VHF-2100+

Typical Performance Data

FREQ. (MHz)	INSERTION LOSS (dB)			INPUT RETURN LOSS (dB)			OUTPUT RETURN LOSS (dB)		
	@ -55° C	@ +25° C	@ +100° C	@ -55° C	@ +25° C	@ +100° C	@ -55° C	@ +25° C	@ +100° C
50	64.71	62.72	73.31	0.01	0.01	0.01	0.00	0.01	0.01
100	68.59	65.27	68.78	0.02	0.01	0.01	0.00	0.02	0.01
110	70.68	64.04	70.03	0.01	0.00	0.01	0.01	0.03	0.02
120	65.74	65.06	68.53	0.00	0.02	0.01	0.00	0.01	0.02
130	70.83	69.84	68.43	0.02	0.02	0.03	0.00	0.01	0.01
140	68.17	69.97	69.64	0.01	0.00	0.01	0.01	0.00	0.00
150	65.96	67.93	68.00	0.01	0.01	0.02	0.01	0.01	0.01
160	67.55	68.45	67.84	0.01	0.02	0.04	0.01	0.01	0.02
170	67.47	66.70	65.64	0.01	0.01	0.02	0.00	0.01	0.02
180	66.76	65.78	66.14	0.00	0.01	0.03	0.00	0.01	0.02
190	67.27	64.49	65.96	0.02	0.01	0.04	0.02	0.01	0.03
200	65.02	66.05	66.99	0.00	0.02	0.04	0.00	0.00	0.02
300	63.26	63.08	63.86	0.01	0.01	0.05	0.01	0.02	0.05
400	62.32	62.11	62.04	0.01	0.04	0.06	0.01	0.06	0.07
500	62.69	61.68	62.54	0.04	0.07	0.09	0.00	0.04	0.06
600	64.57	64.87	65.17	0.05	0.10	0.14	0.02	0.06	0.09
700	71.34	71.23	74.13	0.07	0.13	0.16	0.06	0.09	0.12
800	68.37	66.95	66.17	0.07	0.14	0.17	0.07	0.11	0.14
900	57.52	57.35	56.75	0.09	0.17	0.21	0.09	0.13	0.17
1000	51.00	50.64	50.37	0.11	0.18	0.24	0.11	0.15	0.20
1050	48.23	47.97	47.68	0.12	0.21	0.25	0.12	0.16	0.21
1100	45.81	45.57	45.24	0.13	0.23	0.27	0.17	0.22	0.26
1200	41.10	40.81	40.48	0.17	0.25	0.32	0.17	0.25	0.27
1300	36.62	36.35	36.03	0.21	0.31	0.35	0.22	0.28	0.33
1400	32.24	31.94	31.63	0.26	0.36	0.41	0.26	0.33	0.39
1500	27.79	27.47	27.12	0.28	0.39	0.45	0.32	0.39	0.47
1530	26.47	26.16	25.76	0.30	0.41	0.49	0.37	0.43	0.50
1600	23.31	22.95	22.54	0.38	0.49	0.59	0.42	0.52	0.59
1700	18.71	18.33	17.88	0.48	0.61	0.73	0.53	0.68	0.79
1800	14.07	13.68	13.22	0.71	0.89	1.07	0.81	1.01	1.20
1900	9.55	9.16	8.77	1.27	1.55	1.84	1.45	1.76	2.10
2000	5.53	5.30	5.07	2.63	3.10	3.61	2.98	3.52	4.13
2100	2.80	2.78	2.75	5.38	6.12	6.82	6.02	6.91	7.84
2200	1.48	1.58	1.67	9.39	10.22	10.88	10.55	11.61	12.55
2300	1.02	1.15	1.27	13.03	13.70	14.18	14.54	15.28	15.73
2400	0.80	0.93	1.09	15.16	15.77	16.23	16.16	16.50	16.69
2500	0.70	0.84	0.97	16.24	16.84	17.40	16.66	16.80	16.97
2600	0.64	0.79	0.92	16.65	17.11	17.63	16.46	16.51	16.71
2700	0.62	0.78	0.89	15.95	16.23	16.67	15.57	15.61	15.81
2800	0.60	0.74	0.88	14.99	15.12	15.55	14.63	14.66	14.92
2900	0.60	0.74	0.86	13.96	14.04	14.38	13.62	13.70	13.95
3000	0.65	0.78	0.91	13.13	13.13	13.45	12.93	12.95	13.23
4000	0.41	0.57	0.69	15.30	15.57	15.79	15.73	16.14	16.85
5000	0.50	0.68	0.84	12.96	12.98	13.17	13.58	13.42	13.50
5200	0.62	0.82	0.97	10.83	10.92	11.13	11.21	11.12	11.15
6000	1.34	1.60	1.85	6.50	6.47	6.55	6.60	6.51	6.47
7000	2.29	2.57	2.89	4.27	4.36	4.48	4.34	4.42	4.49
8000	3.41	3.53	3.99	3.00	3.28	3.35	3.63	3.53	4.16
9000	3.84	4.16	4.58	2.48	2.67	2.68	2.71	2.91	2.92
10000	4.07	4.25	4.50	2.34	2.69	2.93	2.54	2.79	2.92
11000	2.93	3.35	3.80	4.04	4.50	5.06	4.90	5.78	7.47
12000	12.14	13.16	14.80	1.09	1.59	2.12	1.42	1.77	2.15
13000	6.54	6.09	5.75	2.50	3.27	4.11	2.62	3.22	3.94

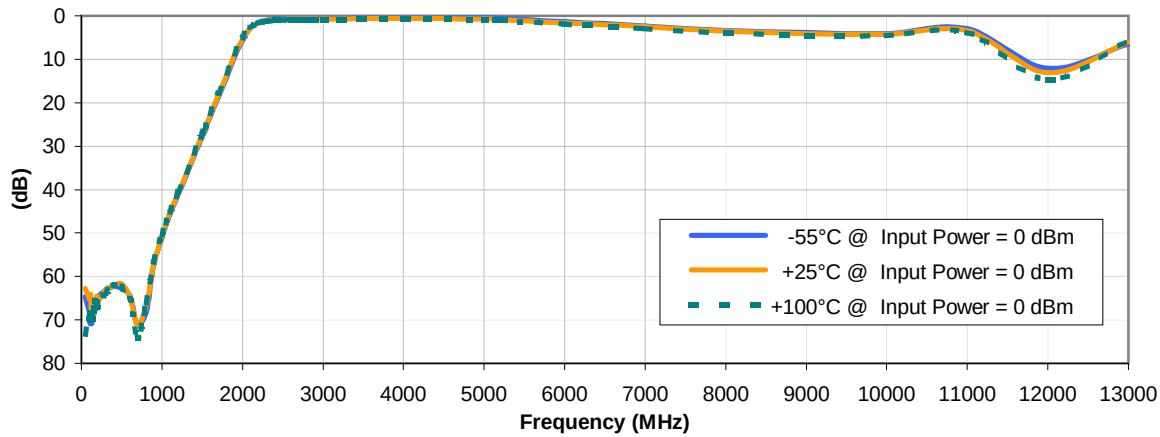
REV. X2
VHF-2100+
101125
Page 1 of 1

Coaxial High Pass Filter

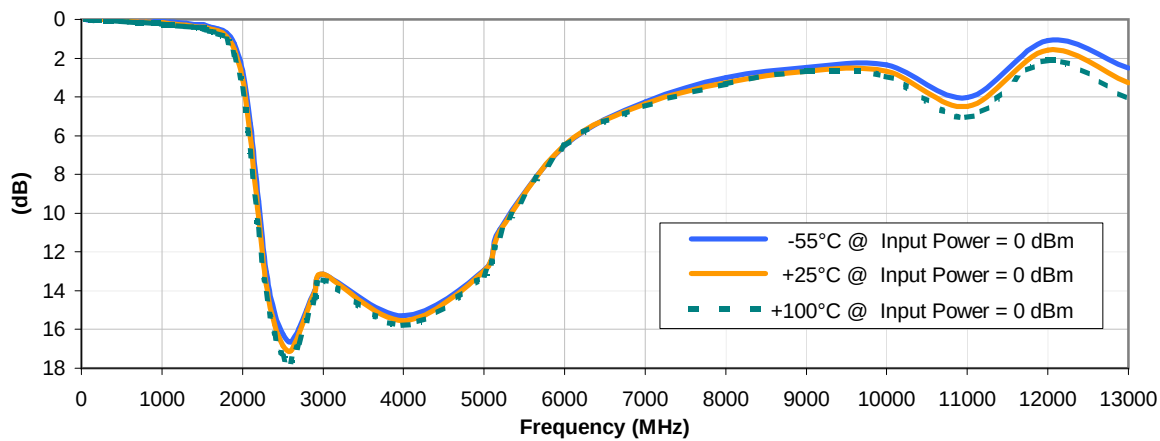
Typical Performance Curves

VHF-2100+

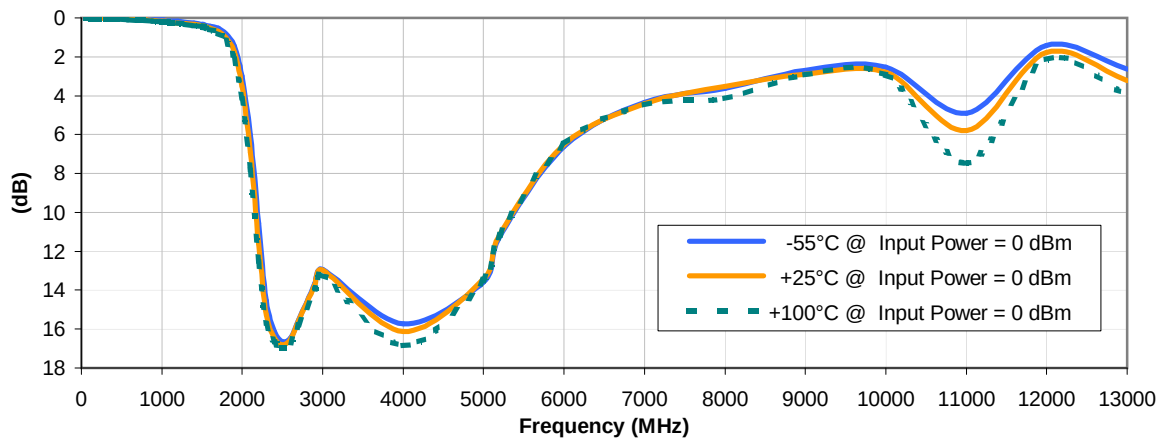
INSERTION LOSS vs. TEMPERATURE



INPUT RETURN LOSS vs. TEMPERATURE

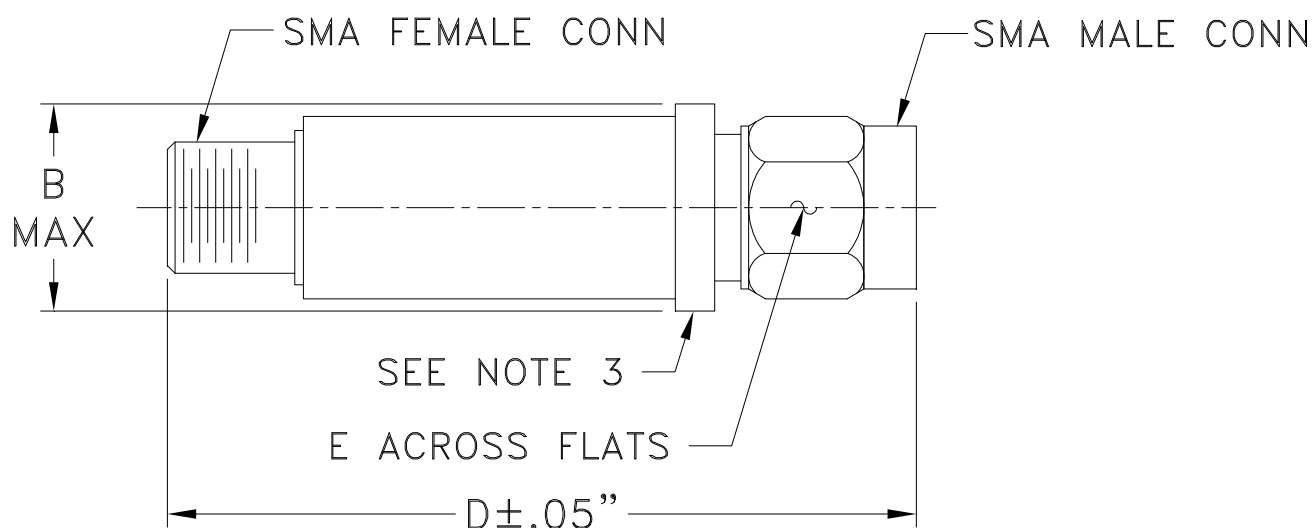


OUTPUT RETURN LOSS vs. TEMPERATURE



REV. X2
VHF-2100+
101125
Page 1 of 1

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.



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



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

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