Coaxial

High Pass Filter

VHF-740+

50Ω 780 to 2800 MHz

Generic photo used for illustration purposes only

CASE STYLE: FF704

Connectors	Model
SMA	VHF-740+

+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.

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

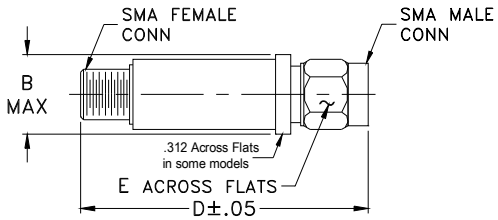
Features

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

Applications

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

Outline Drawing



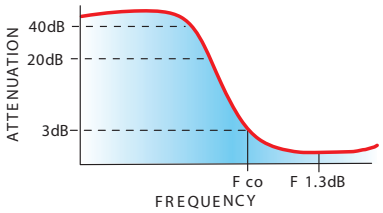
Outline Dimensions (inch / mm)

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

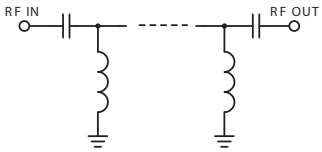
Electrical Specifications (T_{AMB}=25°C)

STOP BAND (MHz) Min.		fco, MHz Nom.	PASSBAND (MHz)		VSWR (:1) Typ.		NO. OF SECTIONS
		(loss 3 dB)	(loss < 1.3 dB)	(loss < 2 dB)		Frequency (MHz)	
(loss > 40 dB)	(loss > 20 dB)	Typ.	Max.	Typ.	Stopband	1.5:1	
430	550	740	900-2200	780-2800	20:1	780-1900	7

typical frequency response

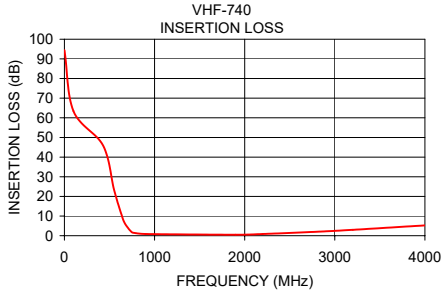


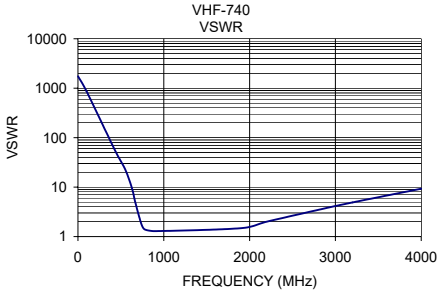
electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1	94.42	1737.18
100	63.46	868.59
430	45.87	56.04
550	23.51	22.87
630	11.25	9.38
670	6.35	4.83
740	2.07	1.78
780	1.40	1.39
900	0.88	1.29
1900	0.51	1.48
2200	0.87	2.00
2800	2.00	3.47
3200	3.00	4.91
4000	5.24	9.28





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-740+

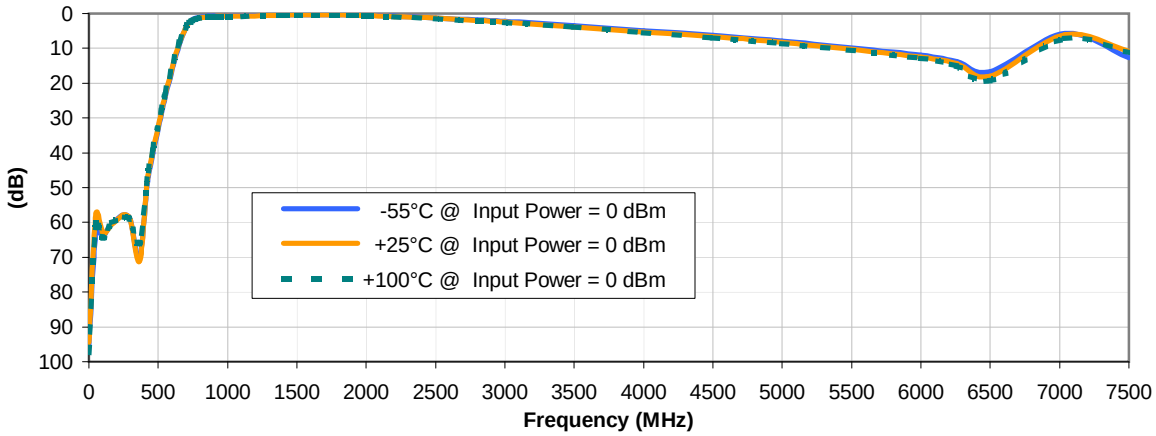
Typical Performance Data

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	95.22	94.42	97.40	0.03	0.01	0.02	0.00	0.01	0.02
50	62.56	57.56	60.54	0.02	0.00	0.01	0.00	0.00	0.01
100	63.88	63.46	64.46	0.01	0.02	0.03	0.00	0.01	0.02
165	60.27	60.49	60.02	0.02	0.05	0.06	0.02	0.04	0.05
285	58.22	58.22	58.82	0.09	0.14	0.16	0.06	0.11	0.15
365	70.15	71.18	66.15	0.16	0.23	0.27	0.13	0.19	0.25
415	50.39	49.39	48.89	0.22	0.31	0.35	0.18	0.25	0.29
430	46.63	45.87	45.22	0.25	0.31	0.39	0.20	0.27	0.33
460	40.04	39.38	38.87	0.31	0.41	0.48	0.25	0.33	0.40
520	29.06	28.49	28.01	0.45	0.60	0.70	0.38	0.49	0.58
550	24.07	23.51	23.03	0.57	0.76	0.87	0.51	0.67	0.78
580	19.26	18.71	18.23	0.77	0.97	1.14	0.68	0.89	1.03
610	14.65	14.16	13.70	1.13	1.42	1.67	1.01	1.27	1.49
650	8.98	8.65	8.24	2.10	2.56	3.02	1.96	2.39	2.80
695	4.25	4.16	4.01	4.91	5.70	6.59	4.72	5.45	6.25
725	2.49	2.55	2.56	8.12	9.10	10.26	7.91	8.81	9.84
740	1.95	2.07	2.13	9.98	11.05	12.23	9.77	10.71	11.82
760	1.51	1.64	1.75	12.50	13.55	14.64	12.34	13.33	14.37
780	1.25	1.40	1.50	14.73	15.75	16.62	14.64	15.63	16.52
860	0.82	0.96	1.08	18.29	18.83	18.49	18.72	19.30	19.01
900	0.75	0.88	1.01	17.61	17.97	17.52	17.94	18.35	17.89
950	0.69	0.82	0.91	16.63	16.95	16.53	16.86	17.19	16.79
1000	0.63	0.77	0.87	15.92	16.12	15.90	15.90	16.11	15.89
1400	0.35	0.46	0.53	23.22	23.66	25.07	23.39	23.92	25.37
1500	0.31	0.41	0.48	31.57	32.30	33.69	34.06	36.13	38.00
1750	0.31	0.43	0.51	18.68	18.43	18.22	18.73	18.61	18.36
1900	0.38	0.51	0.57	14.56	14.32	14.23	14.50	14.32	14.25
2000	0.48	0.61	0.68	12.56	12.34	12.26	12.47	12.31	12.29
2200	0.72	0.87	0.95	9.71	9.55	9.45	9.61	9.49	9.43
2500	1.20	1.36	1.46	6.92	6.90	6.78	6.86	6.85	6.75
2800	1.82	2.00	2.12	5.13	5.15	5.08	5.11	5.10	5.03
3000	2.28	2.45	2.59	4.22	4.26	4.26	4.24	4.25	4.22
3500	3.57	3.79	3.92	2.69	2.78	2.87	2.75	2.78	2.79
4000	4.94	5.24	5.43	1.82	1.88	1.99	1.84	1.89	1.93
4500	6.29	6.70	6.98	1.26	1.34	1.45	1.27	1.36	1.39
5000	7.88	8.28	8.64	0.83	0.97	1.12	0.89	1.01	1.10
6000	12.01	12.41	12.84	0.36	0.56	0.76	0.43	0.59	0.75
6260	13.75	14.37	15.02	0.30	0.48	0.65	0.40	0.56	0.72
6500	16.70	17.96	19.34	0.28	0.47	0.66	0.33	0.53	0.75
7040	5.65	5.99	7.14	5.06	4.20	2.98	8.71	6.82	4.39
7500	12.66	10.90	11.26	1.57	1.99	1.45	1.32	1.71	1.44

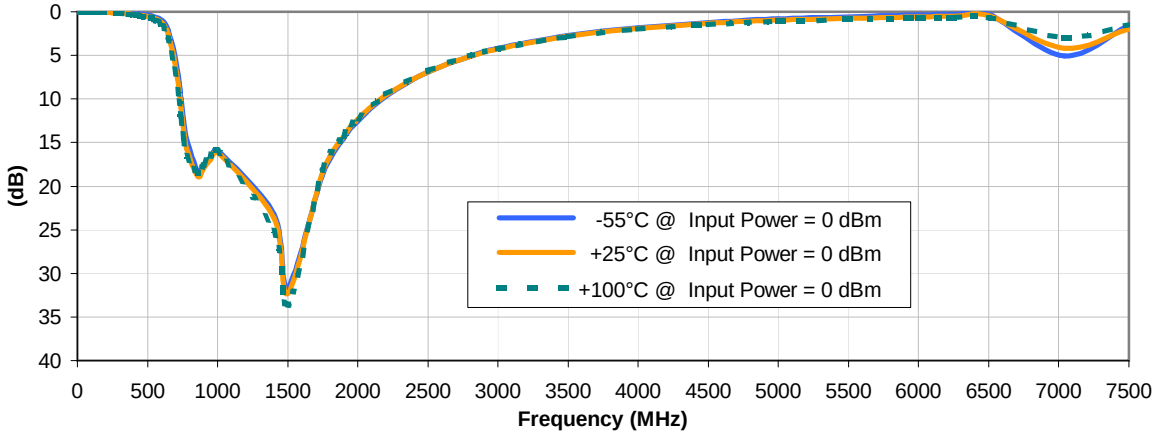
Coaxial High Pass Filter VHF-740+

Typical Performance Curves

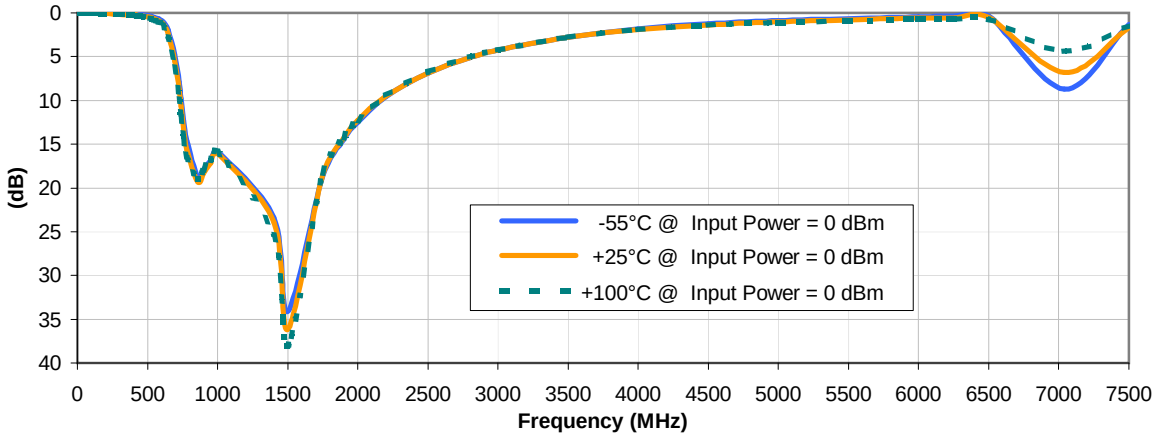
INSERTION LOSS vs. TEMPERATURE



INPUT RETURN LOSS vs. TEMPERATURE



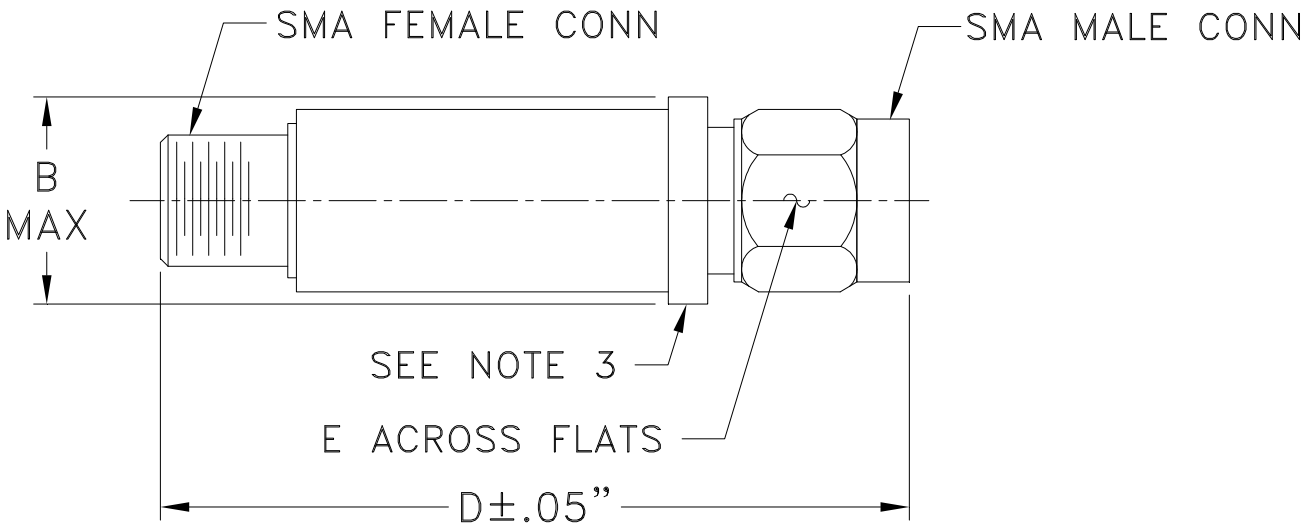
OUTPUT RETURN LOSS vs. TEMPERATURE



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.

Mini-Circuits

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