

The Big Deal

- Wide passband
- Good VSWR (1.4:1 typical)
- High rejection (50 dB typical)
- Flat group delay (4 ns typical)
- Sharp roll-off
- Miniature shielded package



CASE STYLE: HU1186

Product Overview

The BPF-C670+ is a band pass filter fabricated using SMT technology and built into a shielded case (size of 0.87" x 0.80" x .25"). Covering 670 MHz \pm 200 MHz band width, this model is suited for Digital TV application. These units offer good matching within the passband and high rejection. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Sharp shape factor, 1.1	Sharp shape factor helps in adjacent channel rejection and hence increased selectivity.
Good VSWR, 1.4:1 over passband	This provides well matched input and output ports.
More than 50 dB rejection up to 2100MHz	This enables the filter to attenuate spurious signals and reject harmonics for broad band of frequency.
Flat group delay characteristics.	This model has a group delay flatness of 4 ns which helps in reducing the signal distortion.
Shielded case	Reduced interference with and from the surrounding components.

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

Bandpass Filter

50Ω

470 to 870 MHz

BPF-C670+



CASE STYLE: HU1186

Features

- High rejection, 50 dB typical
- Good VSWR, 1.4:1 typical over passband
- Sharp insertion loss roll-off
- Shielded case
- Aqueous washable

Applications

- Digital TV
- Harmonic rejection
- Transmitters / receivers

Electrical Specifications at 25°C

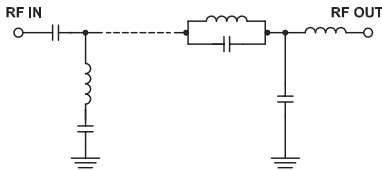
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	670	—	MHz
	Insertion Loss	F1-F2	—	2.0	2.8	dB
	VSWR	F1-F2	—	1.4	1.8	:1
Stop Band, Lower	Insertion Loss	DC-F3	20	40	—	dB
	VSWR	DC-F3	—	29	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	20	30	—	dB
	VSWR	F4-F5	—	18	—	:1

Maximum Ratings

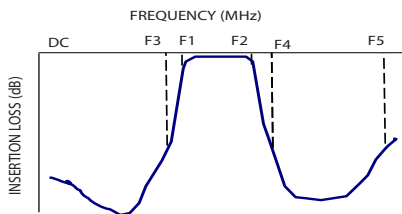
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.7W max.

Permanent damage may occur if any of these limits are exceeded.

Functional Schematic



Typical Frequency Response

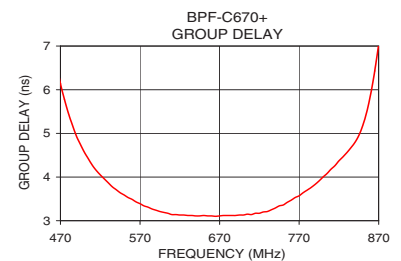
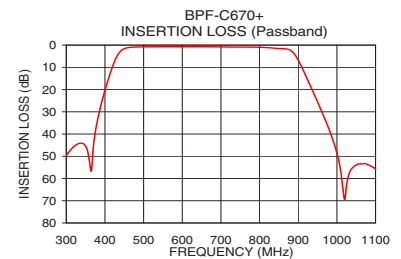
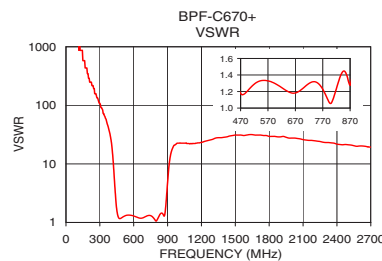
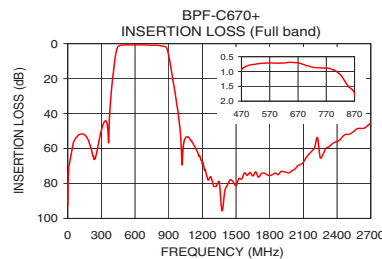


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	92.72	1737.18	470.0	6.14
50.0	56.79	5124.42	500.0	4.57
300.0	49.71	108.58	525.0	3.96
365.0	56.55	48.26	550.0	3.59
400.0	20.38	24.83	580.0	3.31
410.0	14.61	17.22	600.0	3.19
425.0	7.25	7.11	620.0	3.13
440.0	2.79	2.61	630.0	3.12
450.0	1.60	1.66	640.0	3.11
470.0	0.94	1.18	660.0	3.11
670.0	0.71	1.18	670.0	3.11
870.0	1.74	1.28	680.0	3.12
885.0	3.02	2.00	700.0	3.13
900.0	6.77	4.84	740.0	3.29
920.0	13.98	12.01	760.0	3.47
965.0	31.63	20.95	780.0	3.70
1010.0	56.87	22.87	800.0	4.00
1500.0	81.29	31.03	840.0	4.79
2000.0	72.59	27.59	850.0	5.18
2700.0	45.58	19.32	870.0	7.04

+RoHS Compliant

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





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INPUT	2
OUTPUT	9
NOT CONNECTED	6,13
GROUND	1,3,4,5,7,8,10,11,12,14

 DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

 DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Outline Dimensions ($\frac{\text{inch}}{\text{mm}}$)

A	B	C	D	E	F	G	H
.870	.800	.25	.100	.097	--	.060	.040
22.10	20.32	6.35	2.54	2.46	--	1.52	1.02
J	K	L	M	N	P		wt
.105	.910	--	.060	.060	--		grams
2.67	23.11	--	1.52	1.52	--		2.85

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