

TV filters for DVB-T and DVB-H

non-critical mask

TYPES

BF4-3C100D
BF4-4C100D
BF4-6C100D

BF4-3C250D
BF4-4C250D
BF4-6C250D

BF4-3C1K0D
BF4-4C1K0D
BF4-6C1K0D

Band-pass filters are used to attenuate frequencies outside a narrow pass-band. They are commonly used as components in the design of combiners, for the attenuation of noisy side bands, to achieve additional decoupling between transmitters installed in close proximity in the same antenna system, and to combine digital channels with existing analogue channels.

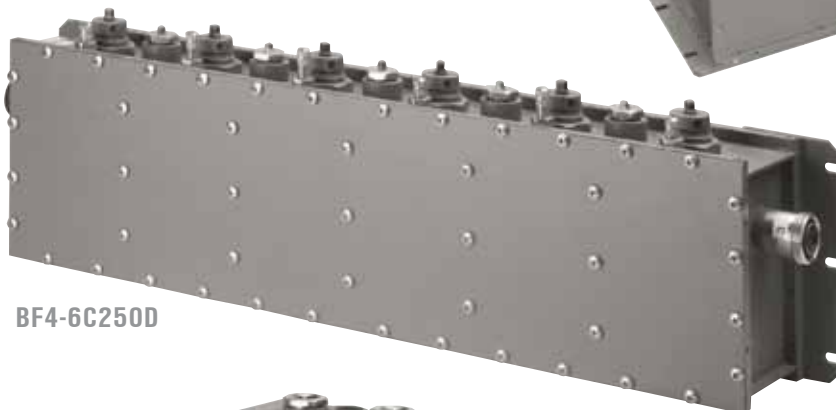
The BF4-3CpppD band-pass filter consists of three magnetic coupled coaxial resonators with adjustable coupling and BF4-4CpppD with four and BF4-6CpppD with six. One end of the resonator is open-circuited and the other short-circuited, and tuning is accomplished by rotating the circular central conductor at the lower end of each resonator. The coaxial input and output lines are coupled to the first and last resonator by magnetic coupling loops.

The band-pass filter is factory tuned to the desired operating channels. All filters are retunable on whole frequency bands IV and V.

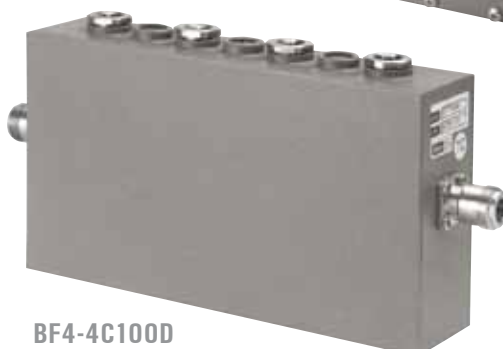
All these filters are suitable to operate as an output filter of the transmitter, most commonly are used as components of combiners (starpoint or constant impedance combiners). See more details on pages 66-74.



BF4-4C1K0D



BF4-6C250D



BF4-4C100D

TYPE DESCRIPTION

BF_x-yC_{ppp}

BF - band-pass filter

x - frequency range:

4 - UHF band IV and V (470 - 862 MHz)

yC - number of cavities:

3C - 3 cavity filter

4C - 4 cavity filter

6C - 6 cavity filter

ppp - input power:

100D - up to 100 W rms

250D - up to 250 W rms

1K0 - up to 1 kW rms

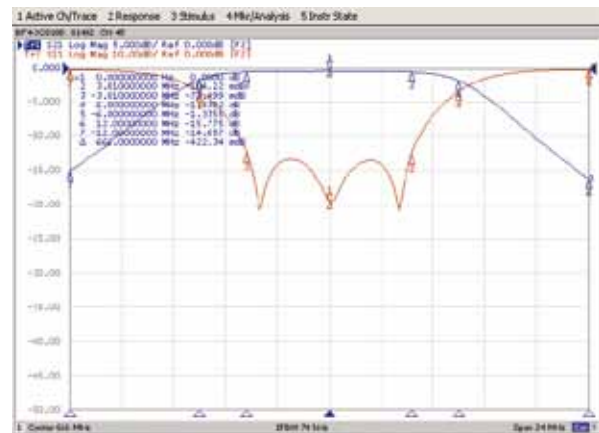
specifications

Digital TV band pass filters up to 100W rms			
	BF4-3C100D	BF4-4C100D	BF4-6C100D
Frequency range	470 – 862 MHz		
Impedance	50 Ω		
Number of cavities	3	4	6
Band pass width	8 MHz / DTT – non critical mask		
Max. input power (W rms)	100		
Return loss f0 (dB)	≥ 25		
Selectivity relative to f0 (dB)*			
f0 ± 4,2 MHz	≥ 0,2	≥ 1,2	≥ 1,8
f0 ± 6 MHz	≥ 2	≥ 6,5	≥ 20
f0 ± 10 MHz	≥ 10	≥ 25	≥ 50
f0 ± 12 MHz	≥ 15	≥ 30	≥ 60
f0 ± 20 MHz	≥ 30	≥ 50	≥ 87
f0 ± 30 MHz	≥ 40	≥ 64	≥ 100
Insertion loss (dB)*			
Center frequency (f0)	≤ 0,41	≤ 0,71	≤ 1,13
f0 ± 3,81 MHz	≤ 0,54	≤ 0,97	≤ 1,50
Group delay at ± 3,81MHz (ns)	≤ 60	≤ 120	≤ 120
Temperature stability (kHz/K)*	15	16	16
Material	Outer conductor aluminum, inner conductor, silver plated brass		
Mounting	Two holes for M4 mounting bolts		
Input and output connectors	N female / N female or SMA / N female		
Temperature range	From -10 °C to +50 °C		
Weight (kg)	1,5	2,0	3,0
Dimensions (mm)	177 x 46 x 103	221 x 46 x 103	280 x 46 x 103
Cooling	Fan-less convectional cooling		

* Measured on mid-channel CH45; table correspond to return loss 25dB and flat response. Higher selectivity or critical mask requirement on request.



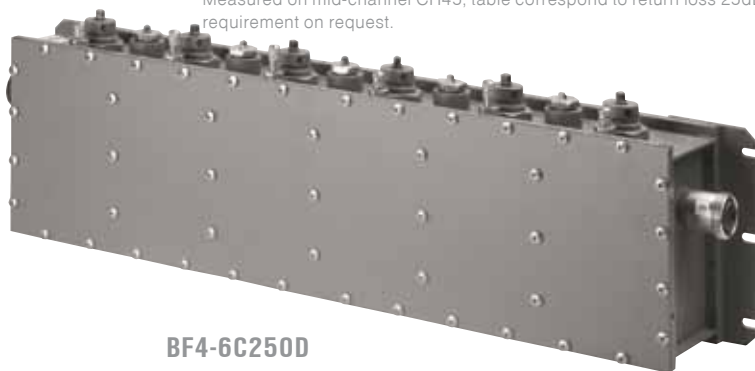
BF4-3C100D



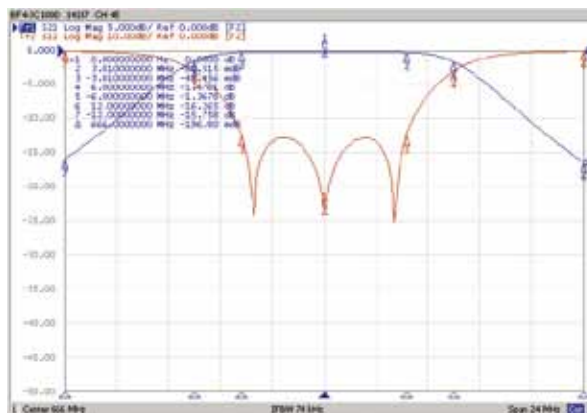
specifications

Digital TV band pass filters up to 250W rms			
	BF4-3C250D	BF4-4C250D	BF4-6C250D
Frequency range	470 – 862 MHz		
Impedance	50 Ω		
Number of cavities	3	4	6
Band pass width	8 MHz / DTT – non critical mask		
Max. input power (W rms)	250		
Return loss f0 (dB)	≥ 25		
Selectivity relative to f0 (dB)*			
f0 ± 4,2 MHz	≥ 0,1	≥ 0,3	≥ 1,5
f0 ± 6 MHz	≥ 1,4	≥ 5,5	≥ 20
f0 ± 10 MHz	≥ 11	≥ 24	≥ 50
f0 ± 12 MHz	≥ 16	≥ 30	≥ 60
f0 ± 20 MHz	≥ 30	≥ 50	≥ 90
f0 ± 30 MHz	≥ 40	≥ 63	≥ 107
Insertion loss (dB)*			
Center frequency (f0)	≤ 0,24	≤ 0,37	≤ 0,65
f0 ± 3,81 MHz	≤ 0,29	≤ 0,50	≤ 1,10
Group delay at ± 3,81MHz (ns)	≤ 60	≤ 120	≤ 120
Temperature stability (kHz/K)*	14	15	15
Material	Outer conductor aluminum, inner conductor, silver plated brass		
Mounting	Two holes for M6 mounting bolts		
Input and output connectors	DIN 7/16 female		
Temperature range	From -10 °C to +50 °C		
Weight (kg)	4,0	4,8	10,5
Dimensions (mm)	320 x 84 x 170	401 x 84 x 170	560 x 84 x 170
Cooling	Fan-less convectional cooling		

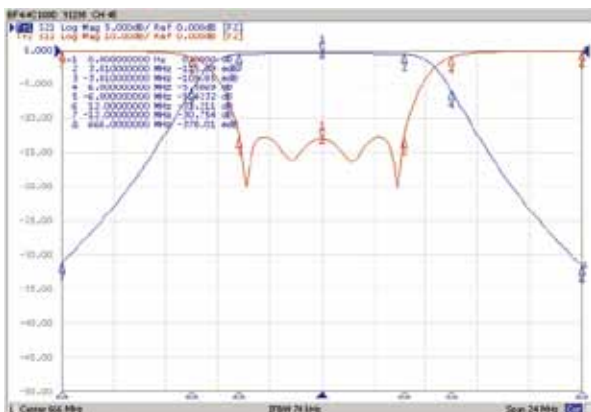
* Measured on mid-channel CH45; table correspond to return loss 25dB and flat response. Higher selectivity or critical mask requirement on request.



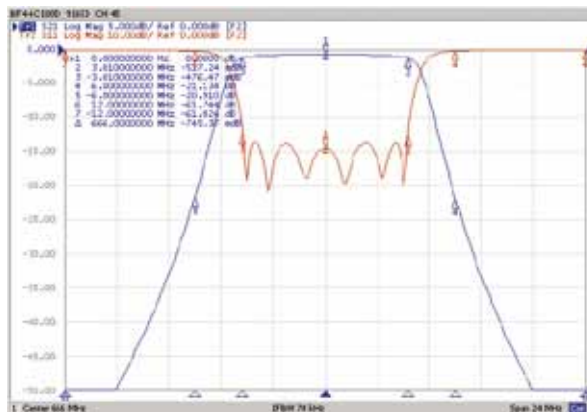
BF4-6C250D



Insertion and Return loss BF4-3C250D



Insertion and Return loss BF4-4C250D



Insertion and Return loss BF4-6C250D

specifications

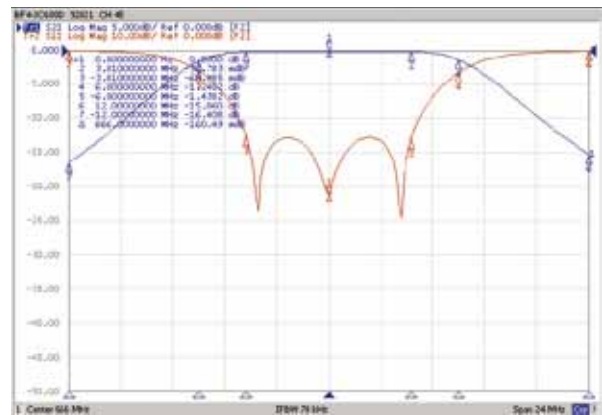
Digital TV band pass filters up to 1kW rms

	BF4-3C1K0D	BF4-4C1K0D	BF4-6C1K0D
Frequency range	470 – 862 MHz		
Impedance	50 Ω		
Number of cavities	3	4	6
Band pass width	8 MHz / DTT – non critical mask		
Max. input power (W rms)	1000		
Return loss f0 (dB)	≥ 25		
Selectivity relative to f0 (dB)*			
f0 ± 4,2 MHz	≥ 0,1	≥ 0,3	≥ 1,5
f0 ± 6 MHz	≥ 1,4	≥ 5,5	≥ 20
f0 ± 10 MHz	≥ 10	≥ 24	≥ 50
f0 ± 12 MHz	≥ 15	≥ 30	≥ 60
f0 ± 20 MHz	≥ 29	≥ 50	≥ 90
f0 ± 30 MHz	≥ 40	≥ 63	≥ 107
Insertion loss (dB)*			
Center frequency (f0)	≤ 0,2	≤ 0,45	≤ 0,65
f0 ± 3,81 MHz	≤ 0,2	≤ 0,60	≤ 1,10
Group delay at ± 3,81MHz (ns)	≤ 60	≤ 120	≤ 120
Temperature stability (kHz/K)*	10	11	11
Material	Outer conductor aluminum, inner conductor, silver plated brass		
Mounting	By means of four screws M6		
Input and output connectors	EIA 1 5/8"		
Temperature range	From -10 °C to +50 °C		
Weight (kg)	15	19	27
Dimensions (mm)	506 x 146 x 321	643 x 146 x 321	889 x 146 x 321
Cooling	Fan-less convectional cooling		

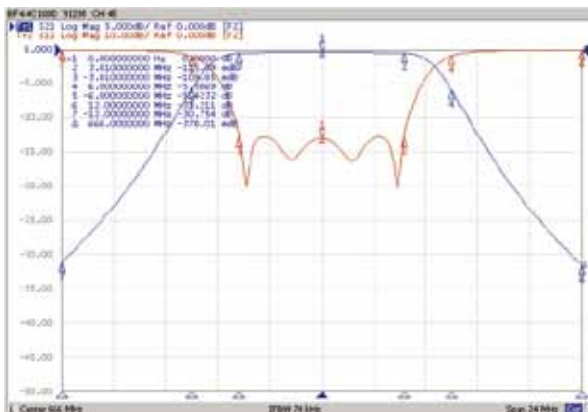
* Measured on mid-channel CH45; table correspond to return loss 25dB and flat response. Higher selectivity or critical mask requirement on request.



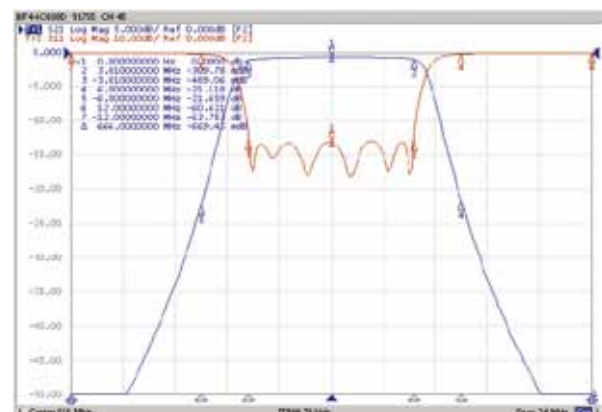
BF4-4C1K0D



Insertion and Return loss BF4-3C1K0D



Insertion and Return loss BF4-4C1K0D



Insertion and Return loss BF4-6C1K0D