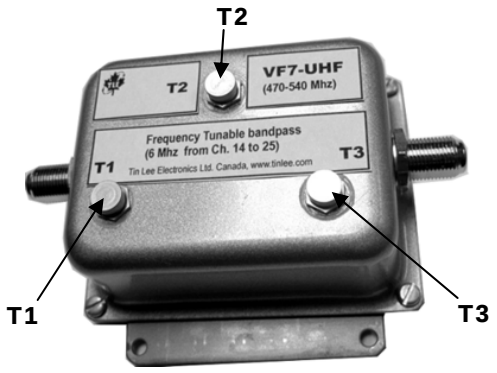
VF7-UHF Tunable UHF channel Bandpass

Description

Model VF7– UHF is a frequency tunable, single channel bandpass filter for TV channel or RF signal band (6 - 8 MHz). Two models are available to cover UHF band from 470 to 620 MHz: VF7-470/540 and VF7-540-620. They provide good signal selectivity and high rejection of out-of-band signals (see example graph). VF7-UHF pass band can be factory preset or user specified. Pass band can be retuned to different frequency (Recommend tuning VF7-UHF with RF equipment to view frequency response).



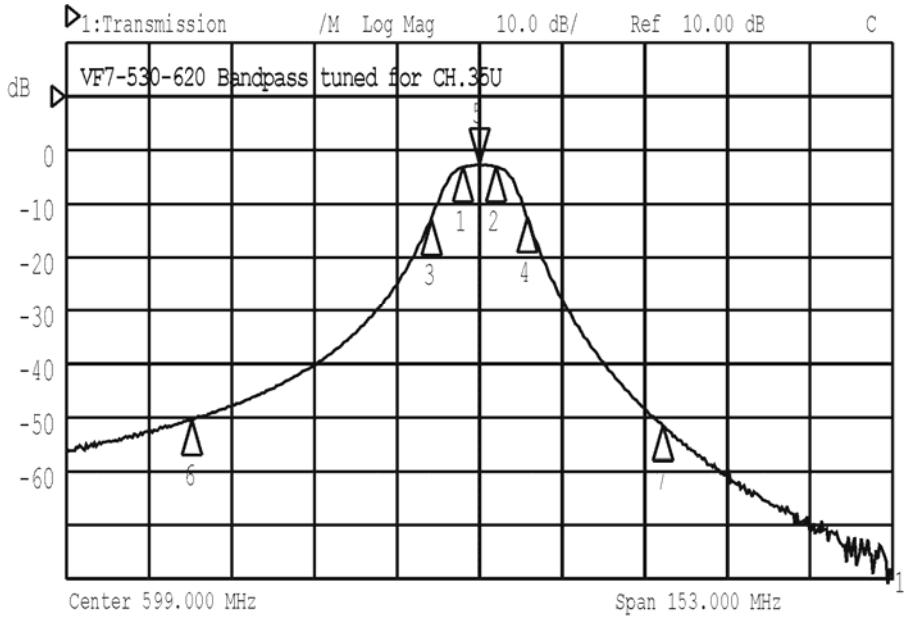
VF7-470/540 & VF7–540/620

Approx. Size (in): 3.25 x 3.25 x 1.5

Specifications

- Pass band: Single UHF channel 6 MHz — user specify (8 MHz option)
- Tunable range: VF7-470/540 (470 to 540 MHz, or, UHF chs 14 thru 25)
- Tunable range: VF7-540/600 (540 to 620 MHz, or, UHF chs 25 thru 37)
- Pass band insertion loss 2.5 to 3.25 dB
- Stop band >10dB: ± 6 MHz from pass band edge
- Stop band >20dB: ± 10 MHz from pass band edge
- Return Loss: ≥15dB; VSWR 1.43 : 1 max
- RF Power handling : 2 Watt max
- Standard Connectors: Type F female, 75 ohms (BNC 75 option)
- Option 50 ohms connectors: BNC, N, or SMA
- Temperature range: -15 to +40 ˚C

Example Graph: VF7-530-620 for ch.35 (6 MHz)



1:Mkr (MHz)	dB	2:Mkr (MHz)	dB
1: 596.0000	-2.986		
2: 602.0000	-3.015		
3: 590.0000	-13.004		
4: 608.0000	-12.684		
5> 599.0000	-2.641		
6: 546.0000	-50.300		
7: 633.0000	-51.607		

Bandpass Adjustments

The frequency of pass band is changed by adjusting T1, T2, and T3. For best results use RF instrument with frequency response viewed at 150 MHz span at Fo for coarse adjustment, then, narrow the span for fine adjustment.

Turn Screws T1/T2/T3 to right for lower Fo

Turn Screw T1/T2/T3 to left for higher Fo

Coarse Adjustment - Tune one tuner at a time, i.e., tune T1 to approx. Fo ,repeat this for T2, and, T3, . Off set each tuner slightly at Fo for 6 MHz bandwidth.

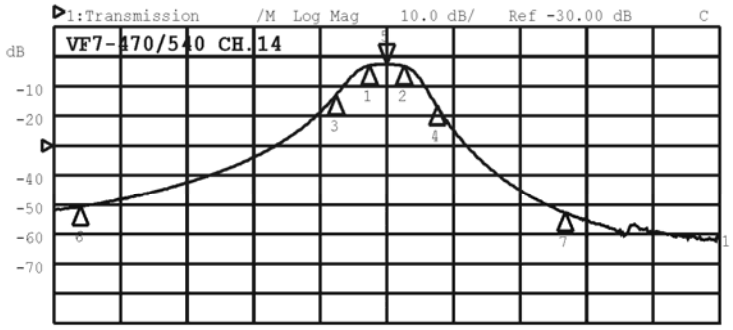
Note: for VF7-470/540, approx. 2.0 turn of screw changes Fo from 470 Mhz to 540; for VF7-540/620, approx 1.0 turn of screw changes Fo from 540 Mhz to 600.

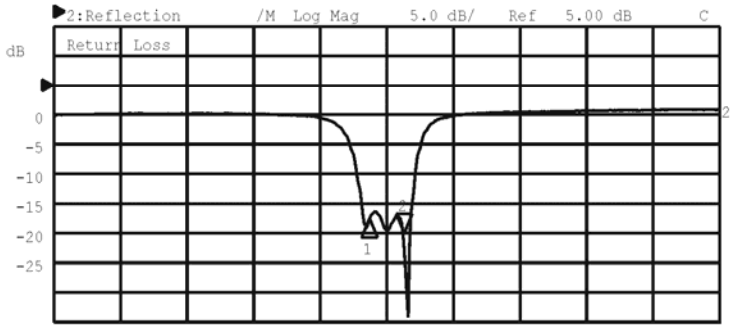
Fine adjustment - for "best" thru loss and return loss at Fo - alternately adjust one tuner very slightly (approx. 1/10 T) in either direction, then do the same with the other tuners. Repeat until desired response is achieved.

Example: To change passband of VF7-470/540 from ch.14 to ch.25 (Fo =473 MHz to 539MHz).

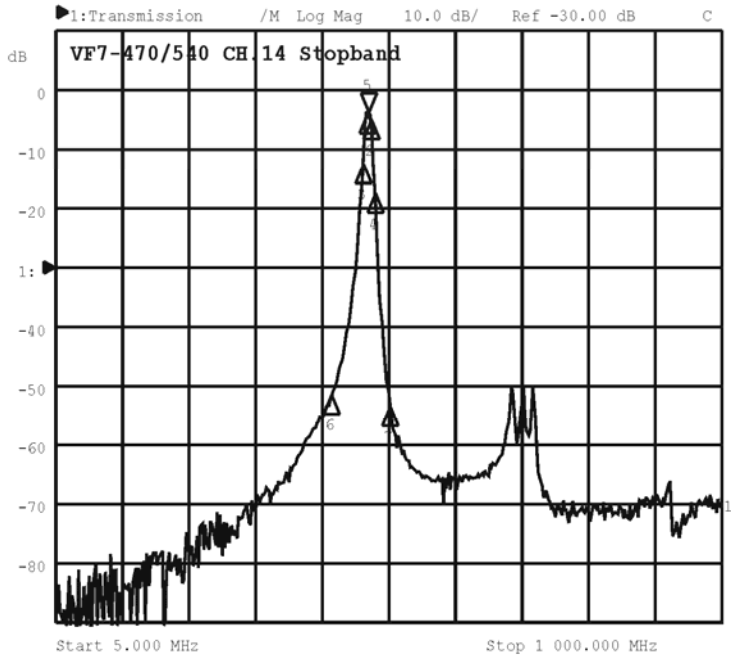
1. Turn T1 to right approx. 2 turns to change Fo=473 MHz to Fo=539 MHz; repeat this for T2 and T3.
2. Fine tune each trimmer for "best" passband response. Alternately adjust each screw with small movement approx. 1/10 turn for "best" Thru loss and Return loss.

Sample graphs shows VF7-470-540 (ch 14 and Stopband) ; VF7-540-600 (chs 25 and 35)

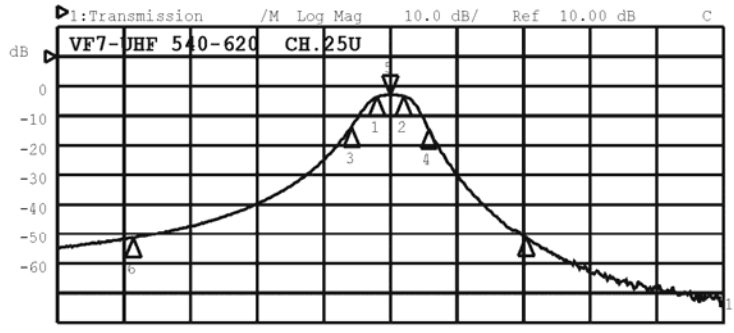


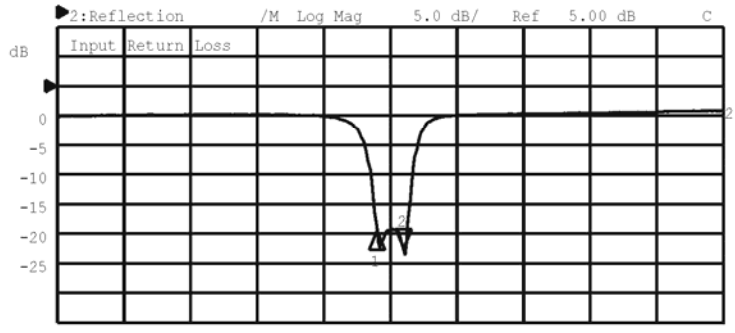


1:Mkr (MHz)	dB	2:Mkr (MHz)	dB
1: 470.0000	-2.992	1: 470.0000	-17.567
2: 476.0000	-3.244	2> 476.0000	-19.949
3: 464.0000	-12.758		
4: 482.0000	-16.526		
5> 473.0000	-2.645		
6: 418.0000	-50.621		
7: 505.0000	-52.713		

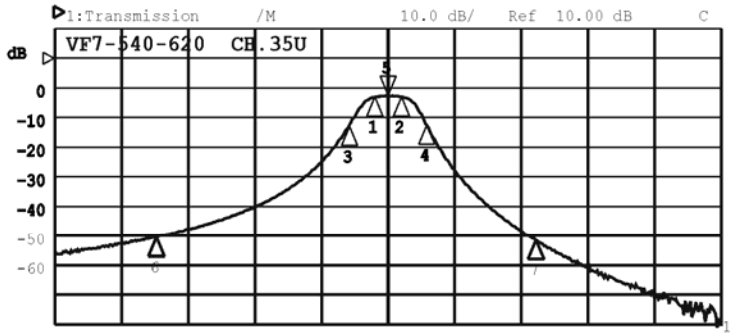


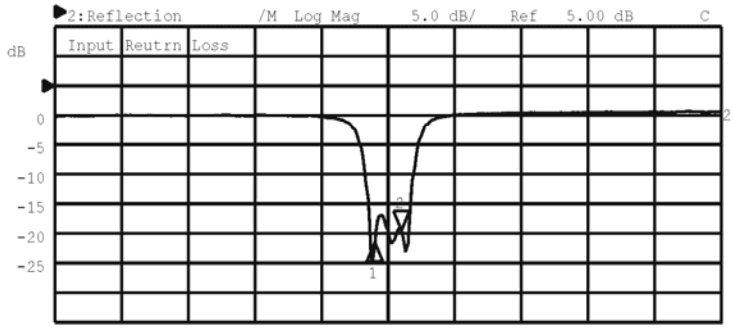
1:Mkr (MHz)	dB	2:Mkr (MHz)	dB
1: 470.0000	-3.923		
2: 476.0000	-4.997		
3: 464.0000	-12.569		
4: 482.0000	-17.599		
5> 473.0000	-3.830		
6: 418.0000	-51.616		
7: 505.0000	-53.453		





1:Mkr (MHz)	dB	2:Mkr (MHz)	dB
1: 536.0000	-3.475	1: 536.0000	-19.415
2: 542.0000	-3.323	2> 542.0000	-22.531
3: 530.0000	-14.037		
4: 548.0000	-14.749		
5> 539.0000	-3.004		
6: 480.0000	-51.321		
7: 570.0000	-50.874		





1:Mkr (MHz)	dB	2:Mkr (MHz)	dB
1: 596.0000	-3.086	1: 596.0000	-21.593
2: 602.0000	-3.015	2> 602.0000	-19.417
3: 590.0000	-13.004		
4: 608.0000	-12.684		
5> 599.0000	-2.741		
6: 546.0000	-50.300		
7: 633.0000	-51.607		

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