Description and Specifications

Model VF7 FM(Fc) LC is an economical, frequency (Fc) tunable, narrow FM, band pass filter. Fc can be tuned from 88 to 108 MHz via two trimmers (T1, T2—see photo). User can specify tune range 88 to108 MHz (factory preset at 98 MHz), or, specify frequency of passband (2.5dB passband thru loss and >18 dB return loss - best tune range optimized Fc ±4 MHz .

- Narrow Passband: <1.5 MHz 3dB BW
- Selectivity: >20dB rejection at Fc ± 3 MHz (see fig.1)
- RF power handling 1 watt
- Final Production graph included

Fc (MHz)	Insertion Loss	Return Loss	Attenuation 20dB	Attenuation 40dB	-3dB BW (MHz)
88	3.5dB	14dB	±2.5 MHz	±7MHz	1.0
99	2.5dB	18dB	±3.0 MHz	±10 MHz	1.25
108	2.5dB	15dB	±3.5MHz	±13 MHz	1.5
Stopband Rejection >40dB	0.3 to 82 MHz & 124 to 400* (*option stopband up to 1000MHz)				
Connectors: F type, 75 ohms					
Connector Options: BNC or N (50 or 75 ohms), and, SMA, TNC (50 ohms)					

Bandpass Adjustments

Adjust with small flat head screwdriver (e.g., R3324 XCELITE). For best results adjust with RF instrument that can show frequency response of filter. VF7 can be tuned to a higher or lower frequency (Fc) by adjusting screw in trimmers T1and T2 (see photo). When both resonators are tuned to same Fc, fine tune each tuner for optimal bandpass response (thru loss and return loss).

Bandpass Adjustment with RF Level Meter

Adjust with small flat head screwdriver. Measure for optimal signal level at desired Fc.
Mark screw driver shaft with tape and reference the tape position with respect to a marking on the surface of filter. When making adjustments note original tuning position and amount of adjustment made (**Tip**: *approx. 3 turns of screw covers range 88 to 108 MHz, or 1.5 Turns from 98 to 88, or, 108 MHz*).

Caution: Do not turn Trimmer Screws beyond the range of the trimmer body. This can damage the trimmer.

VF7-FM LC

Dim: 5.0x 2.75 x 2.2 (in), 13 x 7 x 5.5 (cm)

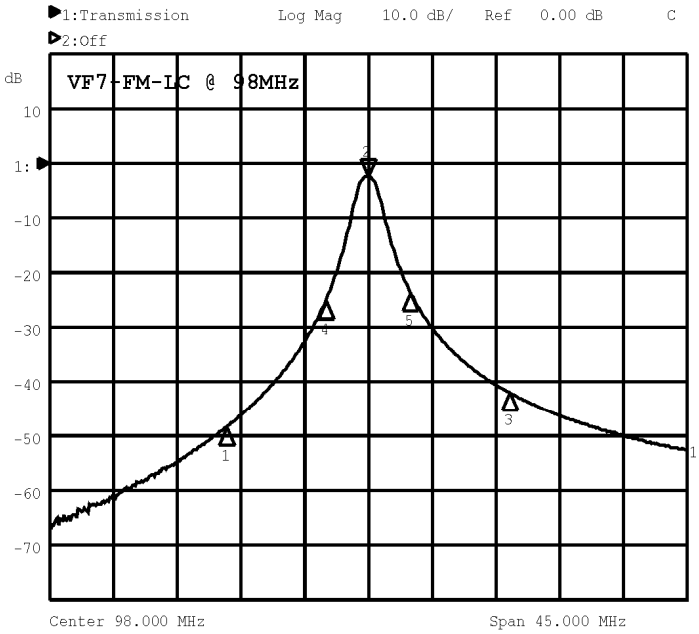
FM Bandpass Adjustments

Turn Screw clockwise for lower Fc

Turn Screw counter-clockwise for higher Fc

Note: Fine tune - slight turn of screw - approx. 1/8 turn.

Fig.1, Example VF7-FM LC tuned to 98 MHz shows typical Thru Loss, Rejection points at 20dB and 40 dB



1:Mkr (MHz) dB	2:Mkr (MHz) dB
1: 88.0000 -48.410	
2> 98.0000 -2.376	
3: 108.0000 -42.061	
4: 95.0000 -25.164	
5: 101.0000 -23.736	