

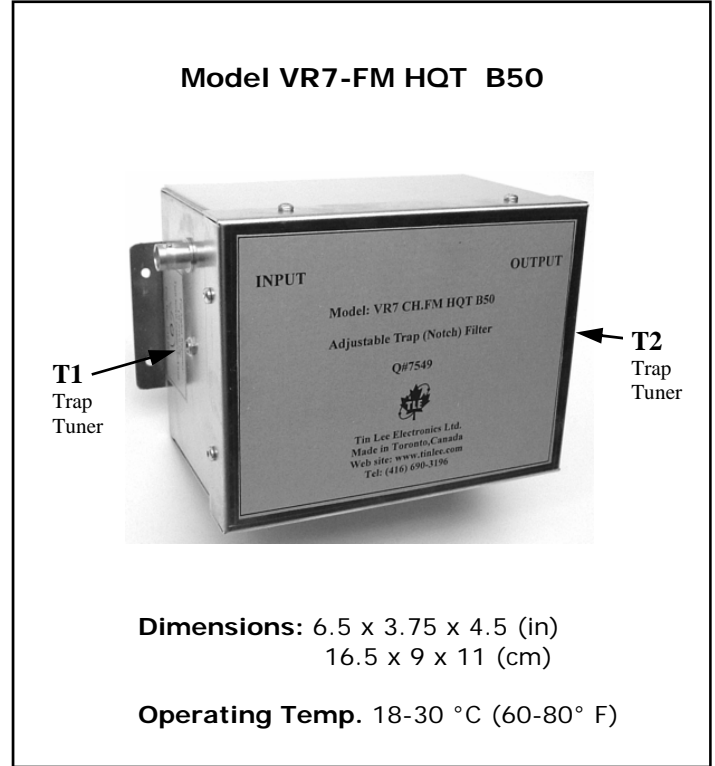


# VR7-FM HQT

## Description and Specifications

Model VR7-FM HQT is a frequency tunable FM notch. Its high selectivity allows rejection of FM signals as close together as 0.1 MHz with low loss to adjacent signals. It consists of two HQ tunable resonators.

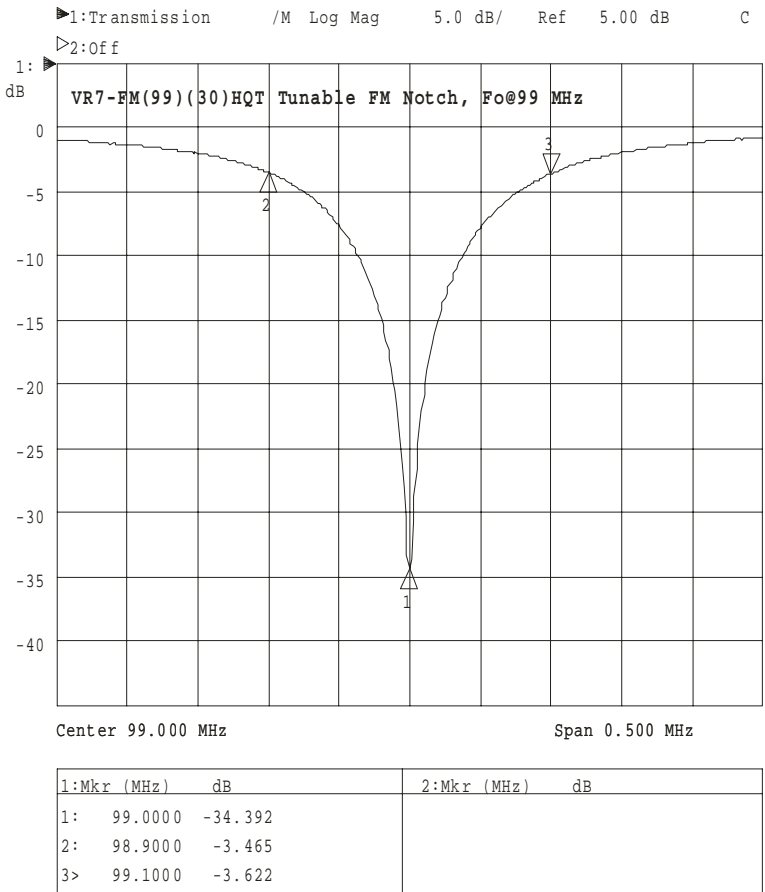
- Notch frequency (Fo): factory preset or user specified
- Rejection: available from 20 dB to 40 dB
- Fo is tunable via two trimmers (see photo).
- Notch tuning range is 88 MHz to 108 MHz
- Optimal Tuning range is  $F_o \pm 5$  MHz
- Rejection of individual notch from 6dB to 12dB
- 3dB bandwidth  $\pm 0.1$  MHz (20dB notch)
- 3dB bandwidth  $\pm 0.2$  MHz (40dB notch)
- Passband: 50 MHz to 150 MHz
- 75 ohms F type connectors (standard)
- Connector Options (50 ohms): BNC, SMA, N
- RF Power handling: 2 watt max
- Graph supplied with this unit (sample below)



**Dimensions:** 6.5 x 3.75 x 4.5 (in)  
16.5 x 9 x 11 (cm)

**Operating Temp.** 18-30 °C (60-80° F)

**Figure 1** shows VR7-FM HQT graph with 30 dB notch at 99 MHz (Fo). 3 dB BW approximately +/- 0.15 MHz.



### Trap Adjustments

- ☺ Turn Screw (T1, T2) clockwise for lower Fo
- ☹ Turn Screw counter-clockwise for higher Fo

**Note:** Adjust with very small movement of screw: < 1/10 turn .

**For best results** use an RF analyzer with sweep view of frequency response at 1 MHz span at Fo. Traps can be re-tuned to a higher or lower frequency by adjusting screw trimmers T1 and T2 (see photo).

**Trap Adjustment without suitable equipment is not recommended.**

**Coarse Adjustments** - Tune one notch at a time to Fo. Individual notch is factory pre-set between 6 to 10 dB attenuation. Fine tune T1 and T2 together to achieve optimum attenuation. Example: Two 10 dB notches (preset) provide >40 dB attenuation with 3 dB BW of +/- 0.2 MHz Fo.

**Fine Tune** - To obtain optimum attenuation - alternately adjust each trap very slightly (1/10 T) in either direction, repeat until required notches resonate together at Fo for desired attenuation.

**Caution:** Do not tune screws beyond the FM frequency range, the screws may be damaged.

