



VR7-FM HQT A

Model VR7- FM HQT A notch filter can be tuned through the FM band. Its high selectivity allows it to reject an unwanted signal (Fo) and preserve adjacent signals (e.g., Fo ± 0.15 MHz – see graph). It consists of two HQ resonators pre-set to specified frequency and attenuation. User can adjust notch with two frequency tuners across the FM band, and, adjust two fine frequency tuners for Fo ± 0.1 MHz.

- Frequency and Attenuation can be User specified (Fo).
Ex: 25 dB notch at 98 MHz, 3 dB BW Fo ± 0.1 MHz
- User specified notch can be tuned from 88 to 108 MHz with optimum performance at specified Fo ± 3 MHz
- Factory pre-set notch characteristics is shown in table 1
- Tuners T1 & T2 controls tuning from 88 to 108 MHz
- Tuners T3 & T4 controls fine tuning Fo ± 0.1 MHz
- Rejection at Fo is available from 15 dB to 35 dB
- Rejection by an individual resonator is 6dB to 12dB
- Pass band: 50 MHz to 250 MHz
- Connectors (75 ohms): F –female, BNC optional
- Connector options (50 ohms): BNC, SMA, N
- RF Power handling: 1 watt max (30dBm)

Model VR7-FM HQT A B50

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)

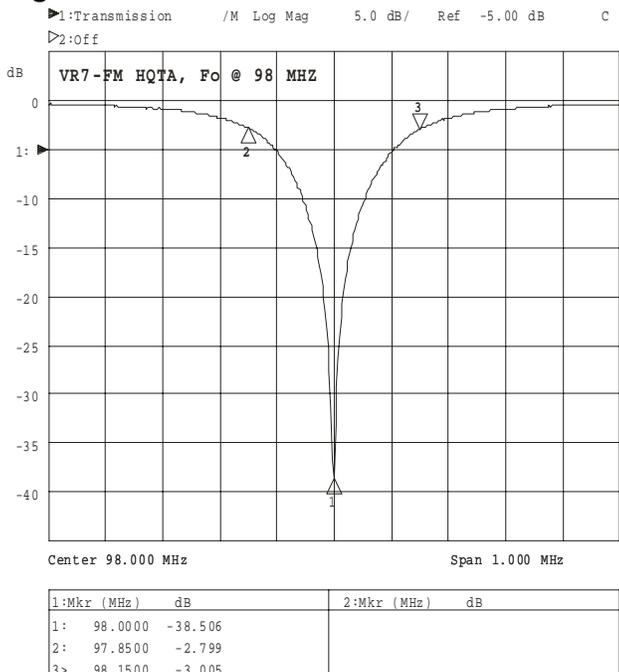
ORDER INFO: Order as VR7-FM-HQT A
Specify: 1. Notch Frequency (Fo), 2. Attenuation (dB), and, 3. Connectors /Impedance.

Example: VR7-99.0(30) HQT A N50—Fo: 99 MHz, Attenuation: >30 dB , Connectors: N (female), Impedance:50 ohms

Table 1 VR7-FM HQT A Notch Characteristics

Notch Fo	3dB BW	Attenuation
88 MHz	0.1 MHz	30 dB
98 MHz	0.15 MHz	35 dB
108 MHz	0.2 MHz	40dB

Figure 1 VR7-FM HQT A - Fo=98MHz, >30 dB notch



Notch Tuning Information

In general, adjust T1 and T2 for desired frequency (88 to 108 MHz); adjust T3 and T4 for frequency accuracy. Use RF Network Analyzer or Spectrum Analyzer with Tracking Generator to view frequency response and to tune filter. Filter tuning without viewing filter frequency response is not recommended.

Frequency tuning: Set Analyzer center frequency at 98 MHz, Span 30 MHz to view and tune notch across FM band. Turn screw with very small movement of screw: < 1/10 turn. Alternately turn T1 or T2 to tune notch to desired frequency. Example: Preset notch @ 98 MHz with >30 dB attenuation would have two 8 dB notches combined at 98 MHz. The 3db BW of combined notch is approximately Fo +/- 0.15 MHz.

- Turn Screw to right (clockwise) for lower Fo
- Turn Screw counter-clockwise for higher Fo

Note: User specifies Attenuation at Fo. Or, default notch frequency (Fo) is 98 MHz ,and, individual notch attenuation is approximately preset 6dB (@ 88 Mhz) to 10 dB (@ 108 MHz).

Very Fine Frequency tuning - Tuners T3, T4 can be adjusted 3 turns to left or right to change notch frequency (Fo ± 0.1 MHz). Set RF Analyzer span to 1 MHz to fine tune notch frequency.

Note: To prevent damage to Screw trimmers. Turn screws for the intended frequency range.

