VF7-FM-HQT Adjustable Narrow FM Bandpass

Description

Model VF7-FM HQT is a frequency tunable FM Narrow Band pass filter, designed to pass a specific FM signal, and reject adjacent signals as close as Fo ± 1 MHz. Band pass default frequency is 98 MHz, or, User specified and optimized for thru loss (2.75 dB) and return loss (20 dB) at Fo. VF7-FM-HQT (Fo) is adjustable via High–Q trimmers: T1 and T2.

- Narrow Pass band: ±0.25 MHz 3dB BW
- Pass band insertion loss 3.5 to 4.0 dB at Fo (88-108 MHz)
- Stop band 25dB: Fo ± 1.0 MHz, >40 dB: Fo ± 3.0 MHz
- Stop band >55 dB: 5 to 80 MHz, 116-400 MHz
- Frequency Tuning Range: 88 to 108MHz
- Connectors: F type, 75 ohms (BNC 75 optional)
- Connectors for 50 ohms option: BNC, N, or SMA

VF7-FM HQT

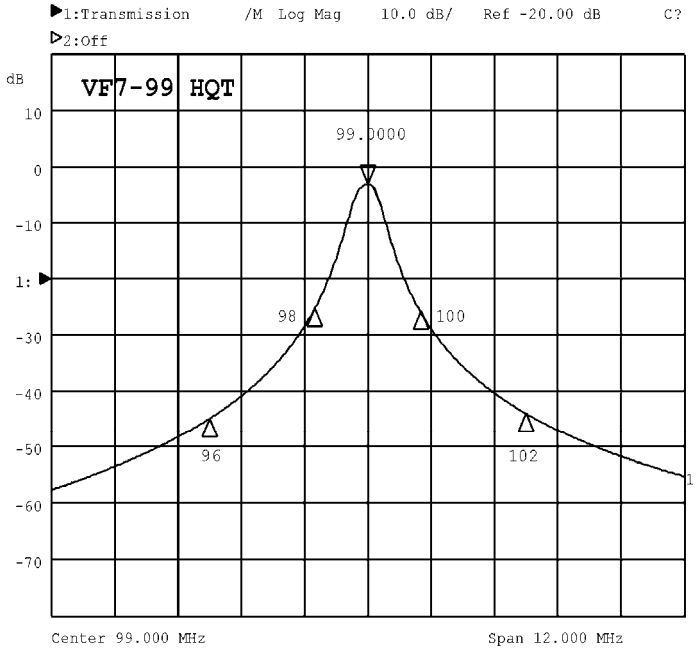
Turn T1, T2 screws clockwise for lower Fo

Turn T1,T2 counter-clockwise for higher Fo

Specifications

Frequency	Insertion Loss	VSWR	Return Loss (dB)	Attenuation 25dB	-3dB Bandwidth
88	4.0 dB	1.5:1	>14	±0.9 MHz	±0.20 MHz
99	3.25 dB	1.3:1	>18	±1.0MHz	±0.25 MHz
108	3.5 dB	1.4:1	>16	±1.15MHz	±0.30 MHz
Tune Range		88 to 108 MHz (or optimize at Fo ± 3 MHz)			
Attenuation (>50dB)		5 to 84MHz and 115 to 400MHz (option 1000Mz)			
RF power: 1 Watts		Dimensions (l/w/h): 7.0 x 3.5 x 4.25 (in), 18 x 9 x 10.5 (cm)			
Connectors: 75 ohms Impedance		F-type female; BNC (female) optional			
Connectors: 50 ohms Impedance		BNC; N; SMA (female)			

Example Frequency Response



Bandpass Adjustments

To adjust frequency of band pass, use small flat head screwdriver to turn T1 orT2 screws. Use RF Network Analyzer or a spectrum analyzer with tracking generator to view frequency response of the filter:
VF7 passband can be tuned to a higher or lower frequency by adjusting screw trimmers T1 or T2, turn one screw at a time, to desired frequency.

Turn Screw T1/T2 clockwise for lower Fo

Turn Screw T1/T2 counter-clockwise for higher Fo

Note: Adjust screws with small flathead screw driver. Frequency tune screw - in 1/4 turn increments. Fine tune using 1/10 turns.

Order as: VF7-FM(Fc)-HQT

Specify: Pre-set Fc, Connectors/Impedance, e.g., VF7-FM 99-HQT

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