



### Description

Model VF7-UHC HT is a general purpose, frequency tunable, UHF, single channel (6 MHz) bandpass for TV or RF signal, from 470 to 620 MHz. Model VF7-UHF HT signal selectivity and rejection of out-of-band signals is shown in sample graphs below. Frequency tuning is via trimmers T1 and T2 (see photo). An example below described tuning of passband.\* Tuners T1 and T2 are self locking. Band pass channel is factory preset or user specified.

\* Use RF equipment, e.g., RF network analyzer, to view frequency response of the filter when tuning.

### Specifications

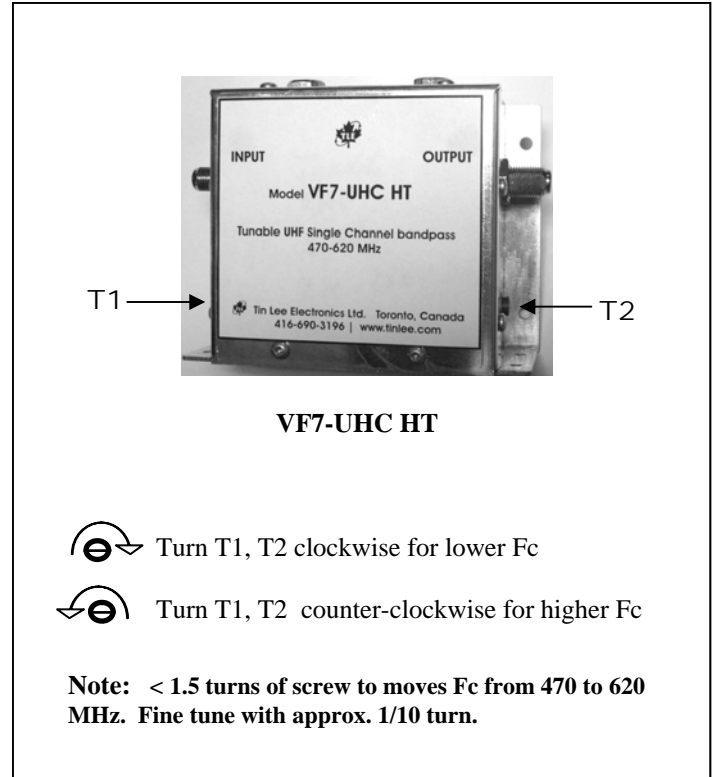
- Pass band: Single UHF channel, 6 MHz — (8 MHz option)
- Tunable range: 470 to 620 MHz (UHF chs 14 thru 39)
- Option: Tunable range (e.g., 580-700 MHz, 700-820 MHz)
- Pass band insertion loss <1.5 to 1.0 dB (470 to 620 MHz)
- Return Loss: ≥14dB; VSWR 1.5 : 1 max
- Rejection (470 MHz) >20dB ± 14 MHz from pass band edge
- Rejection (540 MHz) >20dB ± 20 MHz from pass band edge
- Rejection (620 MHz) >20dB ± 24 MHz from pass band edge
- RF Power handling : 5 Watt max
- Standard Connectors: F female, 75 ohms (BNC 75 option)
- Dimensions (in): 4.5 x 3.5 x 1.75
- Option 50 ohms connectors: BNC, N, or SMA
- Temperature range: -15 to +40 °C

### Example Bandpass Adjustment

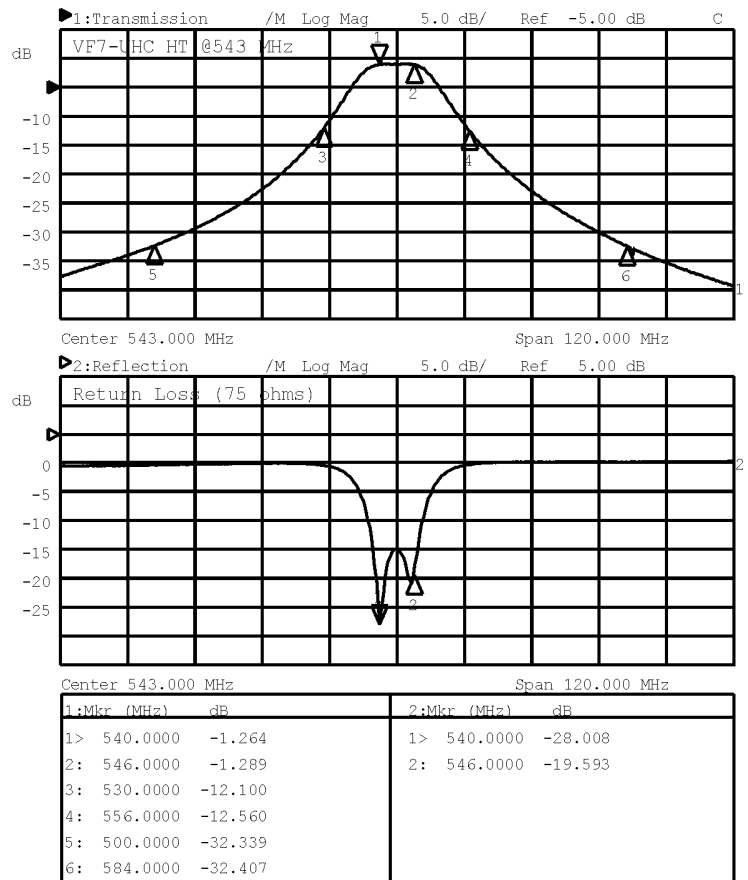
Model VF7-UHC HT passband frequency is tuned via two High-Q trimmer screws: T1 and T2. Remove screw cap, use small flat head screwdriver to tune. View frequency response of the filter using suitable RF equipment when tuning.

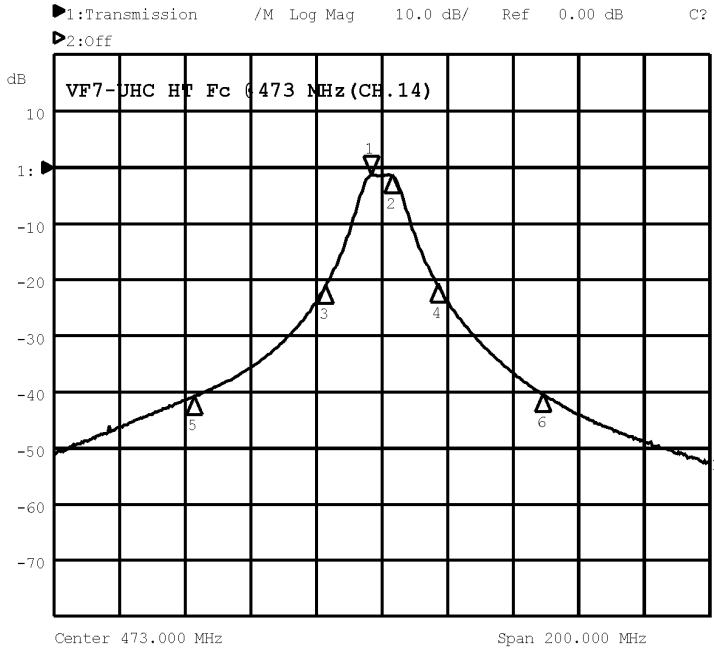
For example, to adjust the passband (Fc) from ch.14 to 25 ( Fc = 473 MHz to 539 MHz):

1. Turn T1 approx. 0.75 turns to right to change Fc from 473 MHz to 539 MHz. Repeat this for T2. (Note: Approx. 1.5 turns of the screw changes Fo from 470 to 620 MHz).
2. Optimal bandpass frequency response occurs when both resonators are tuned to same Fc with best return loss. Alternately adjust T1 & T2 (approx. 1/10 turn) for “best” Return loss.

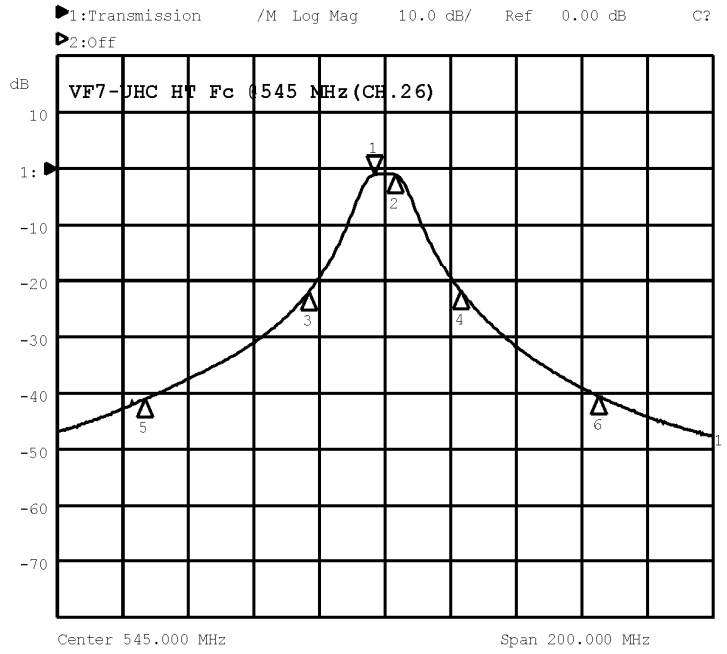


Graph: Example frequency response VF7-UHC HT

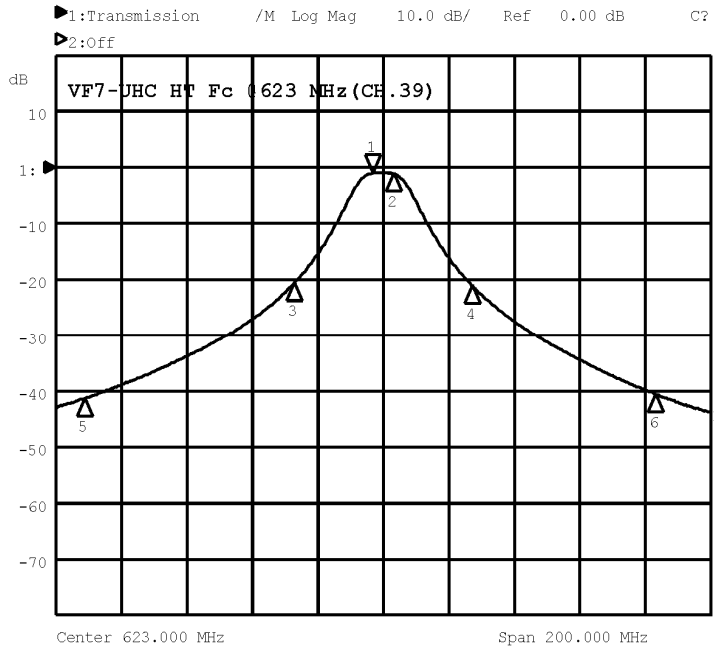




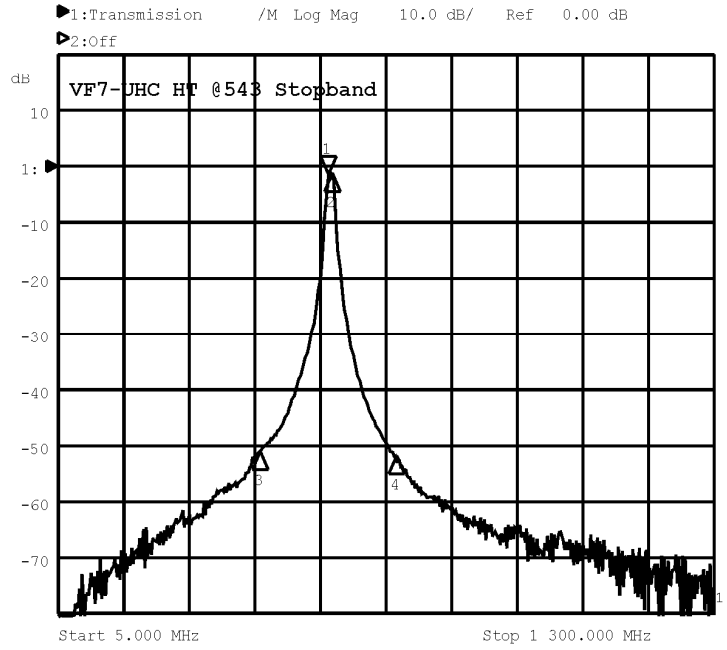
Graph 1: Filter tuned to ch.14



Graph 2: Filter tuned to ch.26



Graph 3: Filter tuned to ch.39



Graph 4: Filter out of band rejection