

Dan has kindly passed on information on how he used Toroids in the BPF.

A reminder though, use of other than the specified inductors by G3XJP, who designed PICASTAR, is not supported by any of the yahoo groups that PICASTAR builders may be members of.

The losses are very low on the wider filters, the toroids have a Q of 220 to 250 compared with a Toko Q of 40 or 50. There is still significant loss on the 30 metre filter, but it's quite acceptable in practise. Also with the iron dust cores the IP3 will be very good.

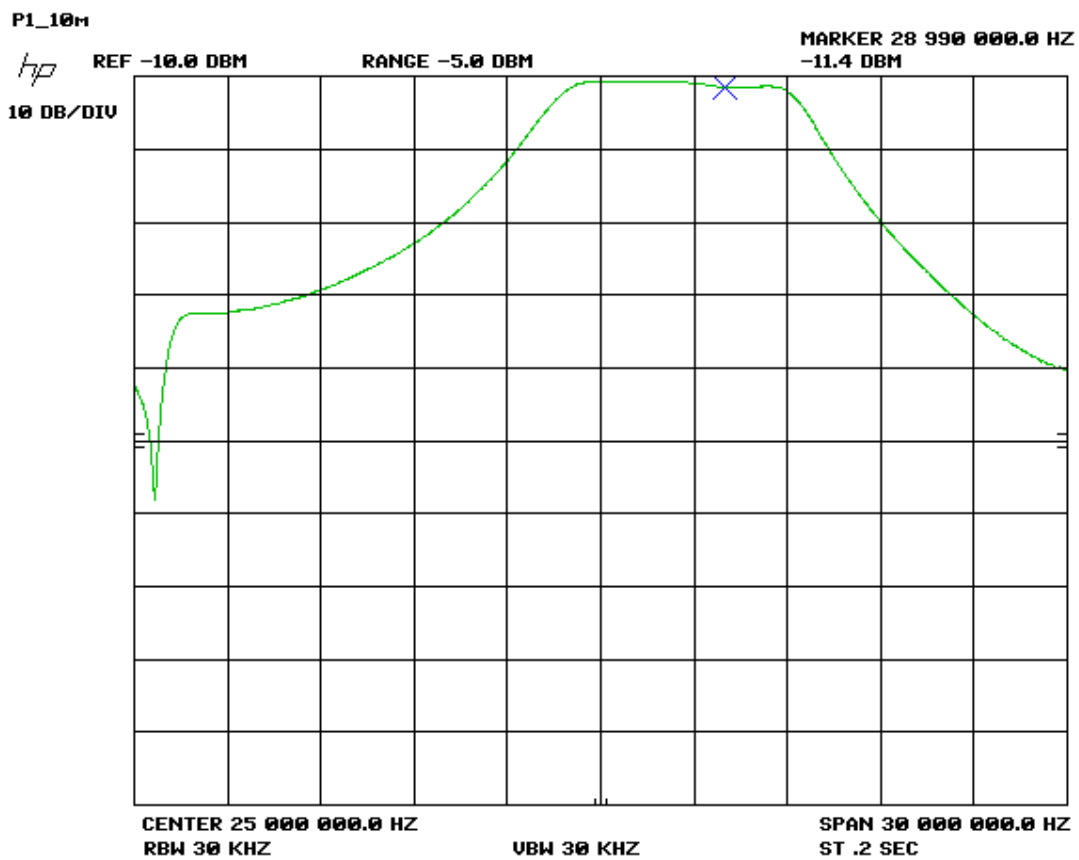
Perhaps not as good as the PA3AKE front end but it's about an eighth of the size.

Also as, I've always said, the IF trap is deep enough to work, which is hard to get with a Toko.

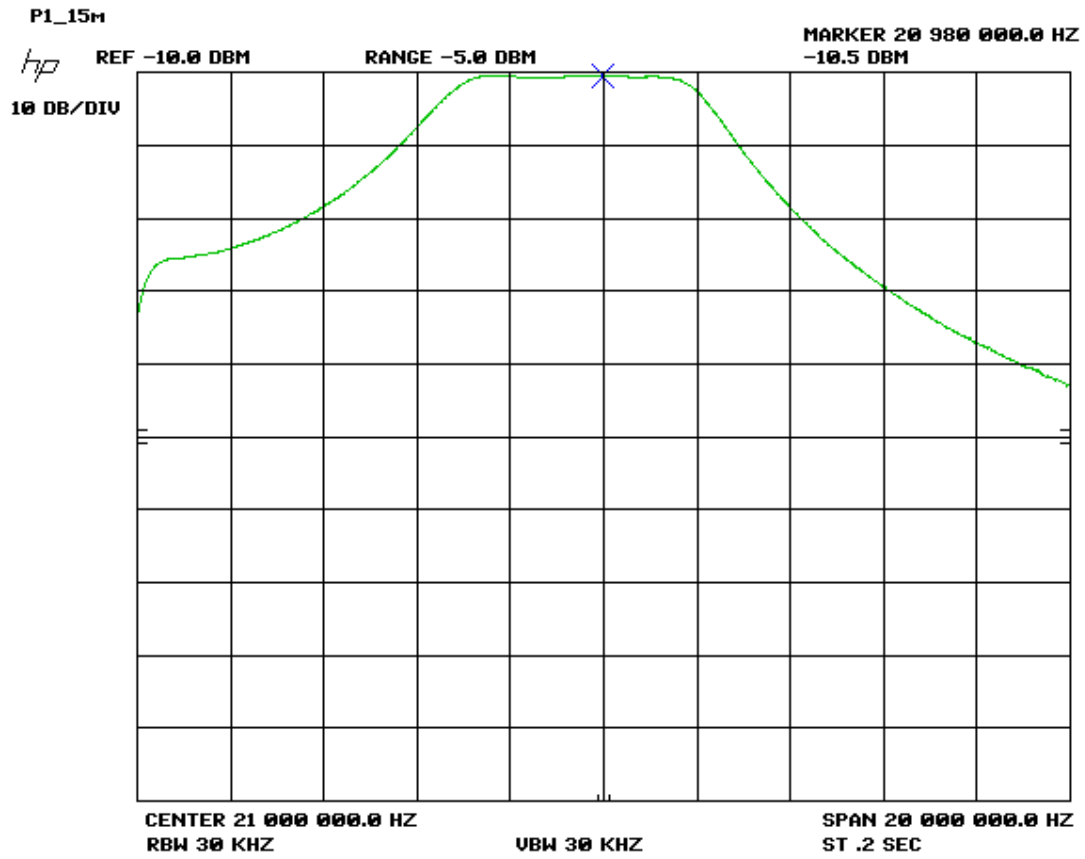
I redesigned the 160 m filter to make it a bit wider than Harold's original which was hard to tweak and get the whole band in. I think he was worried about a local medium wave station. But of course the higher Q helps there as well.

BPF Toroids:

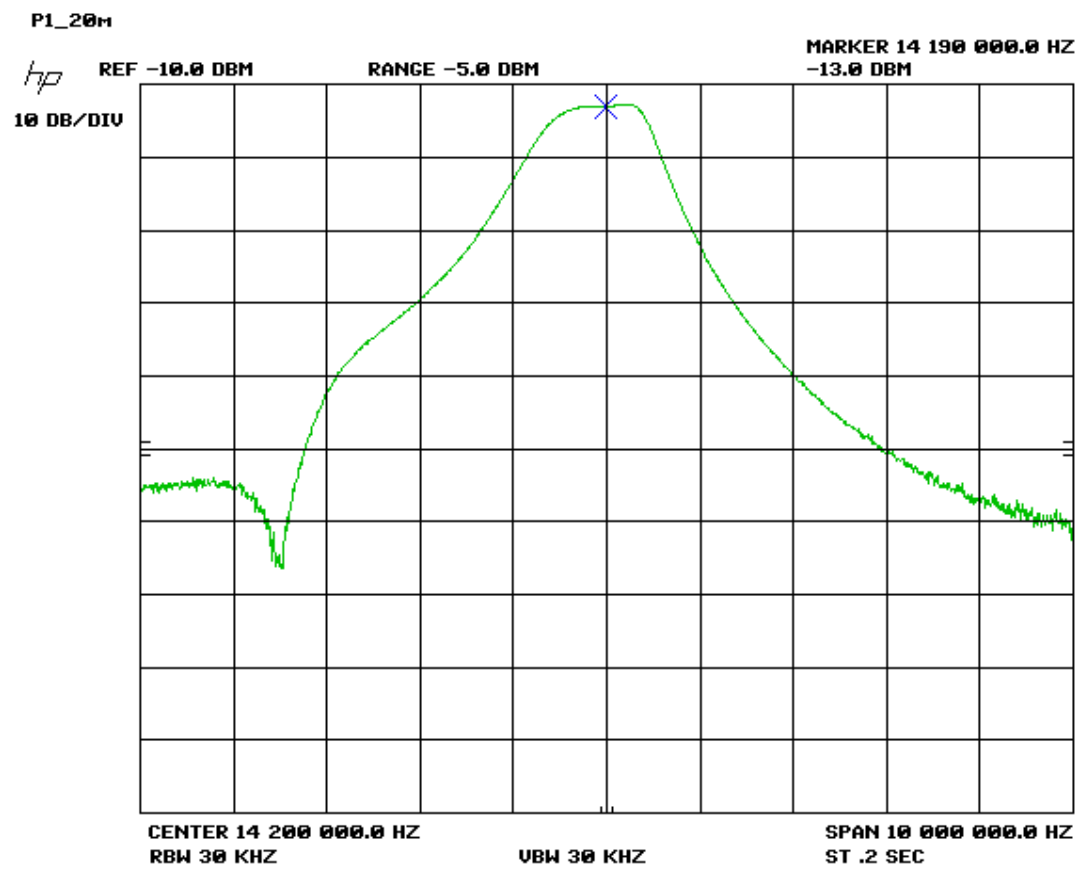
10m 1.25 μ H 19t T37-6 270 degrees



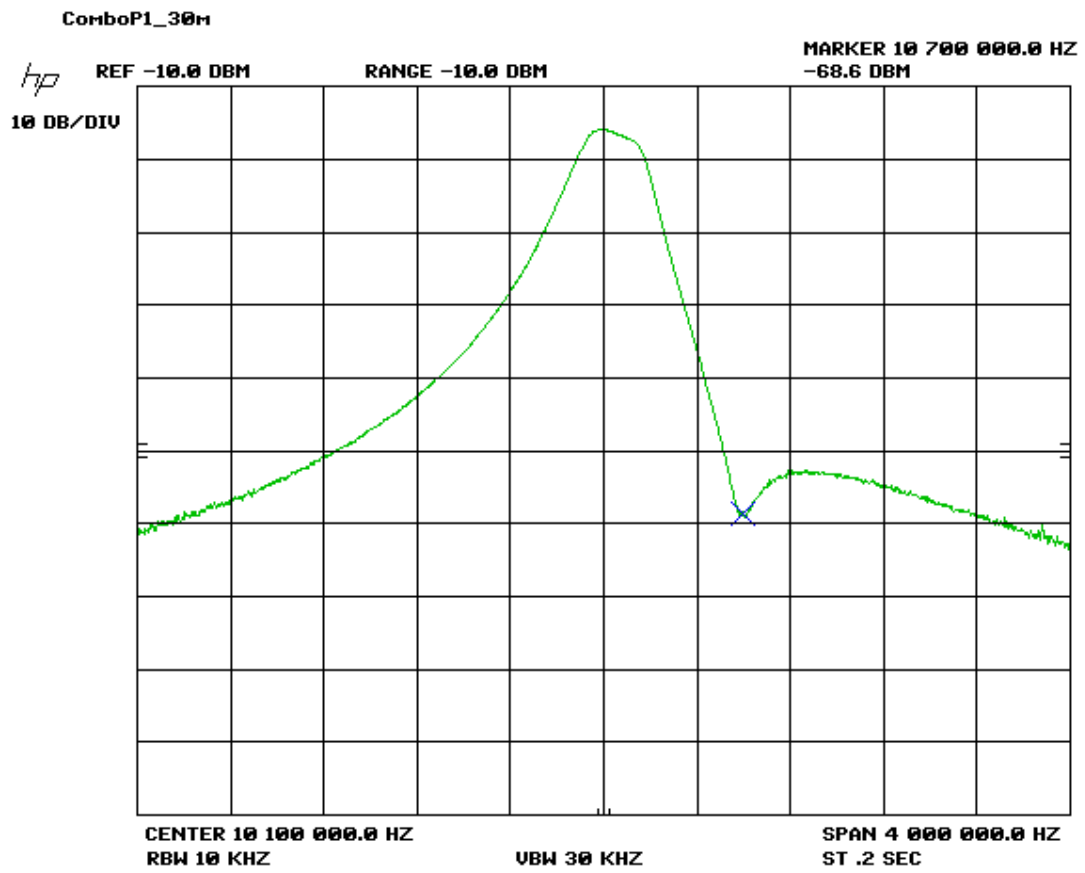
15m 1.67 μ H 23t T37-6 300 degrees



20m 7.15 μH 42t T30-6 Full core

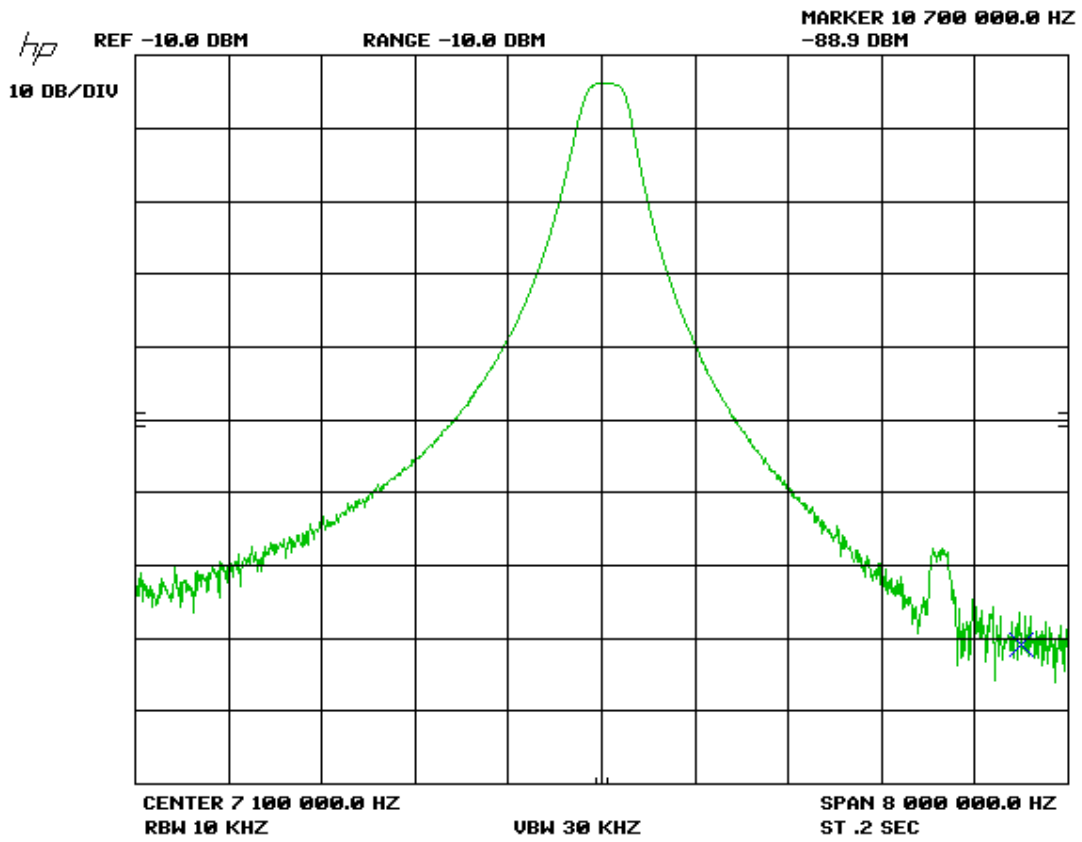


30m 16.7 μ H 58t T50-2 Full

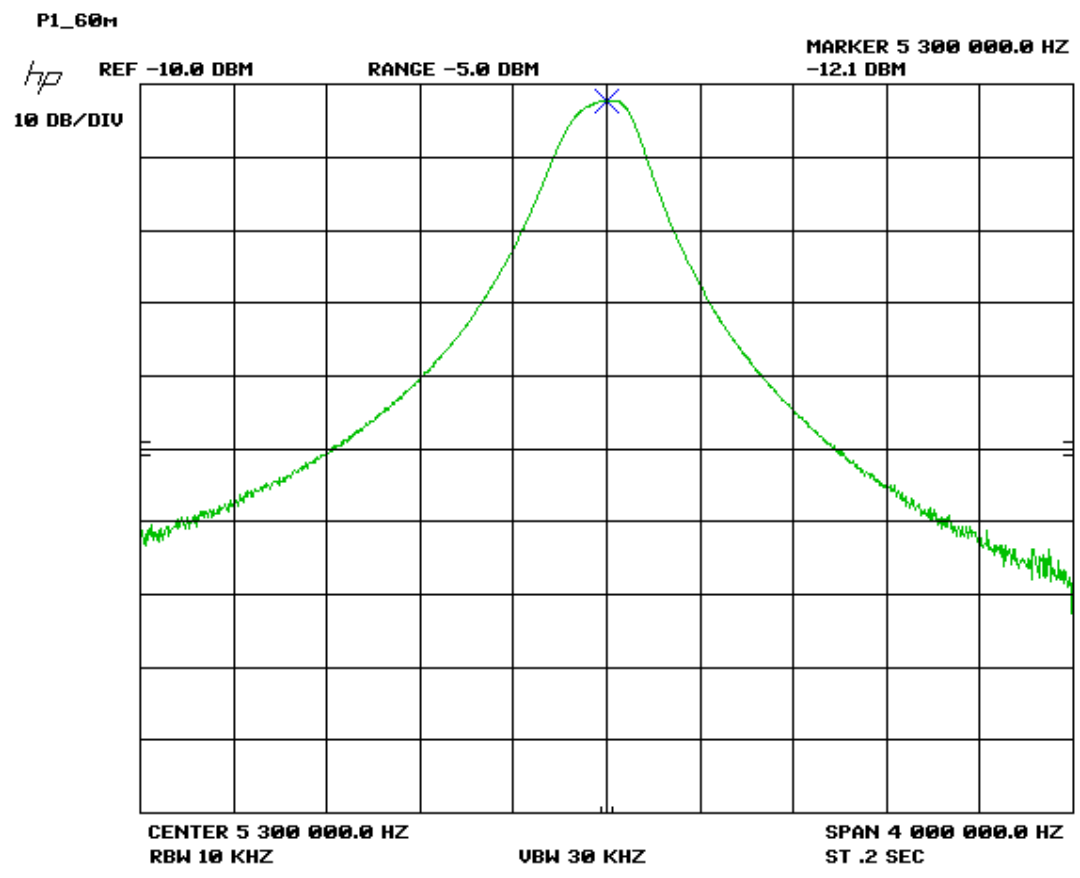


40m 24.5 μ H 69t T50-2 Full

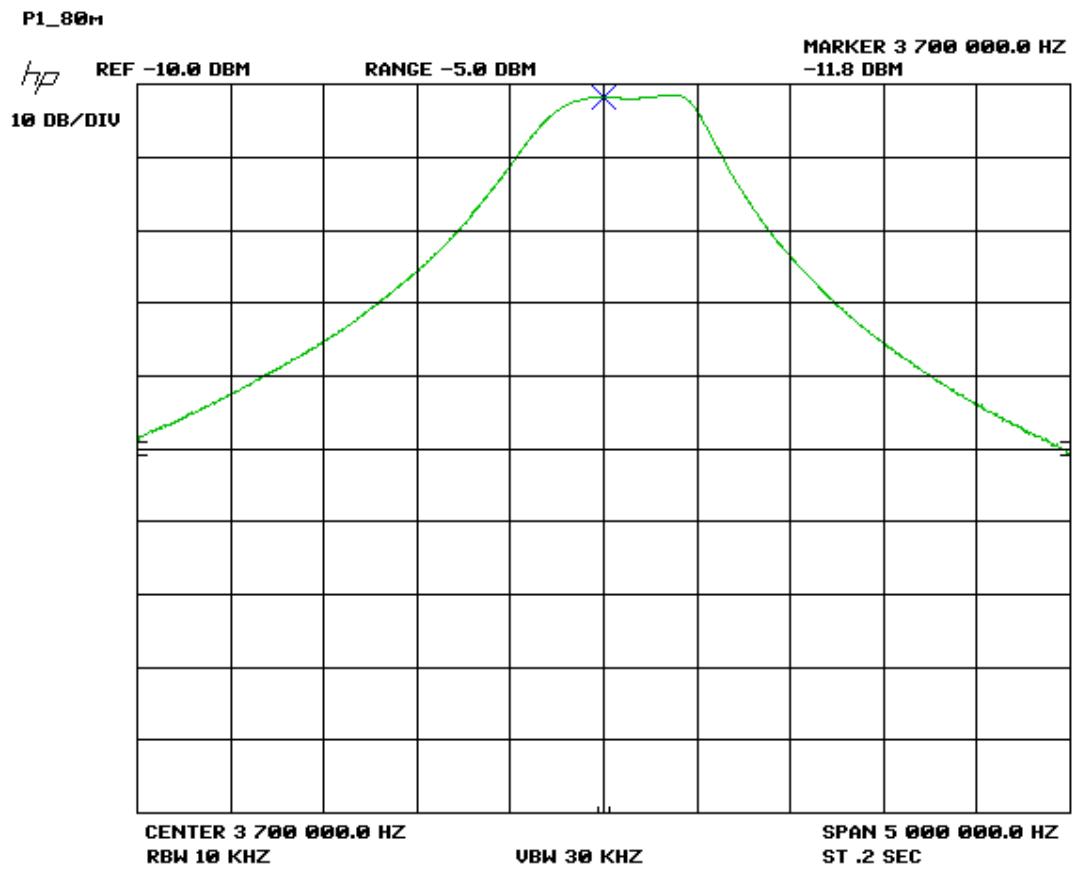
ComboP1_40m



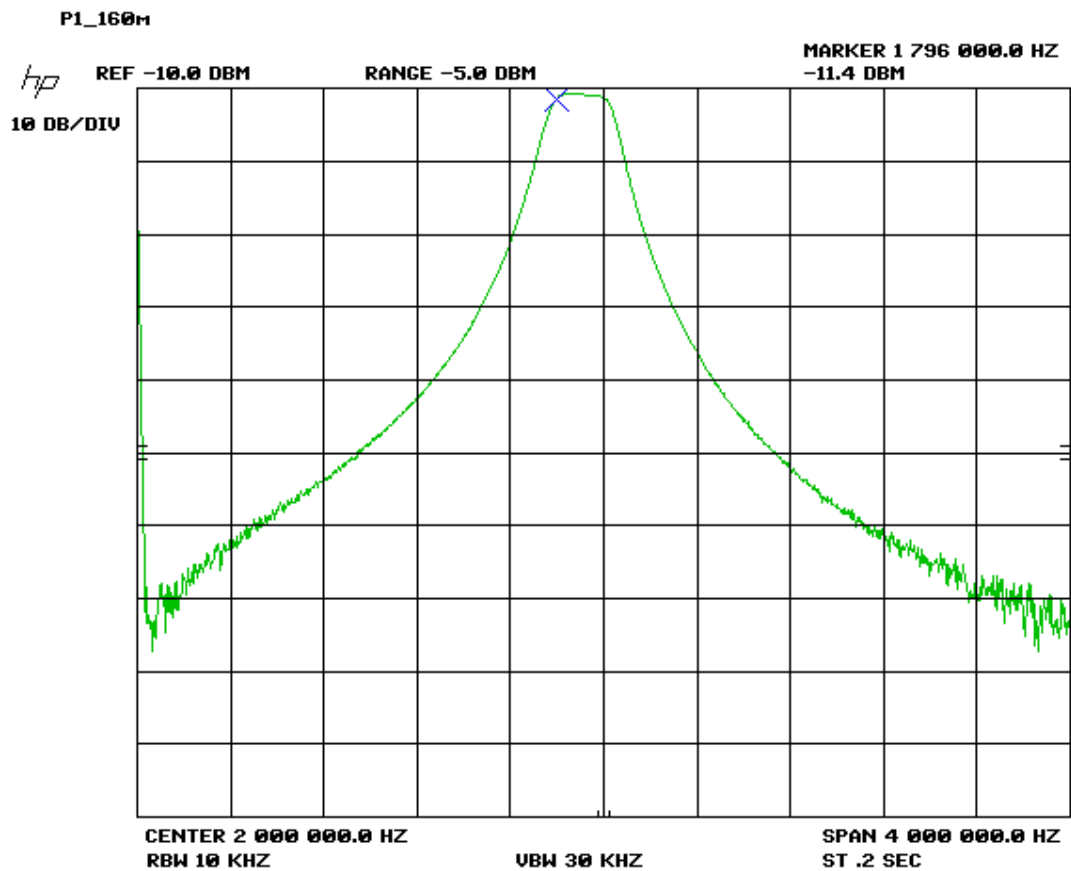
60m 25 μH 69t T50-2 Full



80m 12.5 μ H 50t T50-2 Full



160m 41 μ H 88t T50-2 Full



160m filter was changed to permit full width of band, original values are hard to adjust to cover the full 200 kHz width.

$L = 3 \times 41 \mu\text{H}$ 3 x series C nominal 190 pF 2 x 1760 pF to ground (560pf + 1200 pF)

With all the nominal series caps to permit tuning, I tried to get 2/3rds of the total C fixed and the 1/3rd of the total variable trimmer.

I used mostly the little Murata trimmers which fit on the two unused holes for the Tokos. Small wire links to the fixed Cs.

For the IF trap I used a T68-6 which I had ready wound which resonates at 10.7 MHz with 10 pF fixed NP0 and about 8 pF in the trimmer.

The 10 and 15m cores could just as well be on T30-6 cores, I just used what came to hand.

Dan

AC6AO