

Drake TC-3300-LP QRO LP Filter

By G8MNY

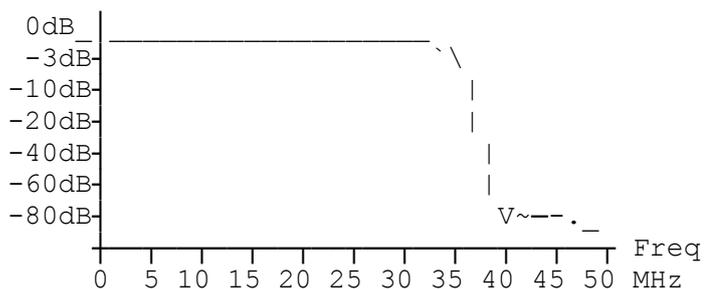
(Update Oct 09)

(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

I have reverse engineered this high performance QRO HF Tx low pass filter. It was used with a QRO PA & it is nice to know, that no matter what QRM you may cause other HF users, above HF all is quieter than can be measured!

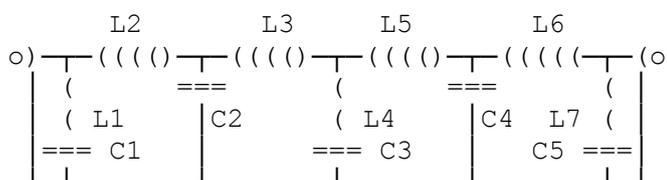
It has other uses, where say 3el HF tribander with 400W is below a 6M 5el beam feeding a band filtered Rig enabling reduced QRM between both bands. See my tech bul "6m VHF Filter Design".

The specification is 1kW MAX @ HF, Attenuation > 80dB above 41MHz. Through loss is practically unmeasurable (< 0.05dB?).



THE CIRCUIT

This is a type of M derived Low Pass filter with 3 suckout trap sections, as well as 1/2 + 1 + 1/2 Pi low pass sections.

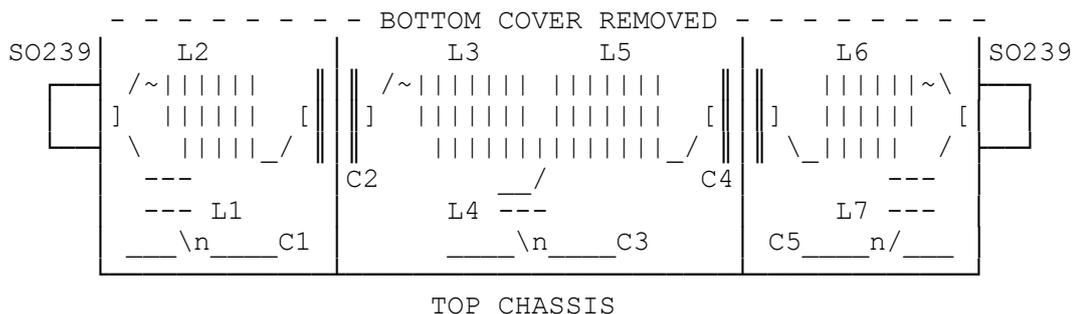


Coils are silver plated 3mm Y wire.  
 L1 = L7 = 0.3uH, 8.5 T on 9mm former.  
 L2 = L6 = 0.4uH, 7 T on 15mm former.  
 L4 = 0.13uH, 3.5 T on 9mm former.  
 L3/5 = 0.4uH each, wound as centre tapped of 15T on 15mm former.

C1 = C5 = 53pF bolted through Mica washer disk.  
 C2 = C4 = 186pF bolted through double sided Mica washer disks.  
 C3 = 124pF larger bolted through Mica washer disk.

The 3 shunt traps L1/C1, L4/C3, & L7/C5 all resonate at 40MHz.

PHYSICAL CONSTRUCTION



The SO239s are riveted on, as are the 2 divider plates. The top chassis has folded edges tapped for screws etc. not shown here for simplicity. The bottom U channel shaped cover is screwed on into the folded edges & it has RF fingering to help ground the 2 central dividers. The cover is the bottom base mounting. (e.g. above is upside down in use.)

Why Don't U send an interesting bul?

73 de John, G8MNY @ GB7CIP