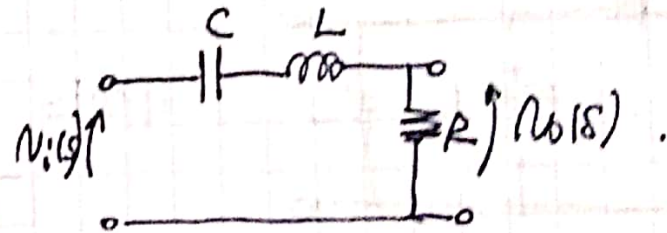Paso bajos Pasivo:

$$H(s) = \frac{s\,R/L}{s^2 + s\,\frac{R}{L} + \frac{1}{LC}}$$

$$SOS_1 = \frac{s\;2\pi\cdot 22KHz \cdots 0{,}1253}{s^2 + s\cdot 0{,}1253 \cdot 2\pi\cdot 22KHz + \left(\sqrt{2\pi\cdot 22KHz}\right)^2}$$

$$Si:\; L_1 = 1mHy. \longrightarrow \frac{R}{L} = 0{,}1253 \cdot 2\pi\, 22KHz$$

$$\frac{1}{LC} = (2\pi\, 22KHz)^2.$$

$$R = 1mHy \cdot 0{,}1253 \cdot 2\pi\, 22KHz$$

$$R_1 = 17{,}32\,\Omega$$

$$\rightarrow C_1 = \frac{1}{L(2\pi\, 22KHz)} = 52{,}335\,nF.$$

Lo mismo para los 3 sos.

$R_1 = 17,32\,\Omega$. $R_2 = 9,540\,\Omega$ $R_3 = 7,77\,\Omega$

$C_1 = 52,33\,nF$ $C_2 = 42,689\,nF$ $C_3 = 64,183\,nf$

$L_1 = 1\,mHy$. $L_2 = 1\,mHy$ $L_3 = 1\,mHy$

- Simulación

Versión activa.

$$Z_1 = \frac{Z_3 \cdot Z_5}{Z_2 \cdot Z_4} = \frac{R \cdot R \cdot R}{R \cdot \frac{1}{SC_{6k}}} = SC_{6k} R_{1-3}^2 \cdot \frac{R_5}{R_4}$$

$$\therefore L = CR^2 \qquad V_6 = V_B \underbrace{\left(1 + \frac{Z_4}{Z_5}\right)}_{k.}$$
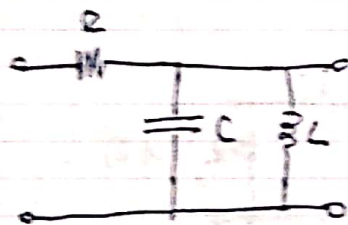
$$H(s) = \frac{s \frac{1}{CR}}{s^2 + s\frac{1}{CR} + \frac{1}{LC}}$$

$k_1 = 4,80$ $k_2 = 1,564$ $k_3 = 1,564$

$\quad \hookrightarrow Z_5 = 1k\Omega$ $\quad \hookrightarrow Z_{5-1-3} = 1k\Omega$ $\quad \hookrightarrow Z_{1-3-5} = 1k\Omega$

$\quad \hookrightarrow Z_4 = 3800\Omega$ $\quad \hookrightarrow Z_4 = 564\Omega$ $\quad \hookrightarrow Z_4 = 564\Omega$

$Z_{1-3} = 1k\Omega$.

$C_{6k} = 38\,nF$ $C_{6k} = 564\,pF$ $C_{6k} = 564\,pF$

$C_1 = 52,33\,nF$ $C_2 = 42,68\,nF$ $C_3 = 64,183\,nF$

$R_1 = 1103\,\Omega$ $R_2 = 2455\,\Omega$ $R_3 = 2000\,\Omega$