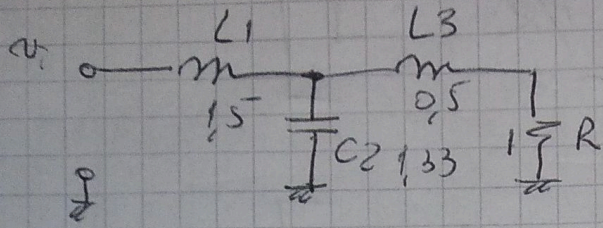
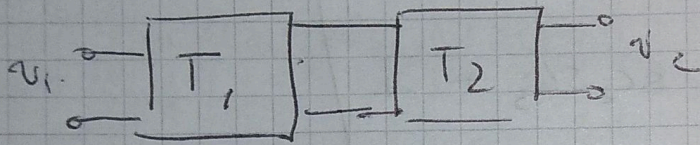
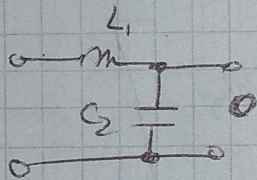


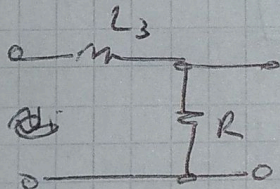
2



Modelo de dos parámetros T de un escalero

 T_1 :

$$\begin{bmatrix} A_1 & B_1 \\ C_1 & D_1 \end{bmatrix}$$

 T_2 :

$$\begin{bmatrix} A_2 & B_2 \\ C_2 & D_2 \end{bmatrix}$$

$$T_1 = \begin{bmatrix} 1 + Z_{L1} Y_{C2} & Z_{L1} \\ Y_{C2} & 1 \end{bmatrix} = \begin{bmatrix} 1 + s L_1 s C_2 & s L_1 \\ s C_2 & 1 \end{bmatrix}$$

$$T_2 = \begin{bmatrix} 1 + Z_{L3} G & Z_{L3} \\ G & 1 \end{bmatrix} = \begin{bmatrix} 1 + s L_3 \frac{1}{R} & s L_3 \\ 1/R & 1 \end{bmatrix}$$

$$T = \begin{bmatrix} 1+s^2 L_1 C_2 & sL_1 \\ sC_2 & 1 \end{bmatrix} \begin{bmatrix} 1+\frac{sL_3}{R} & sL_3 \\ \frac{1}{R} & 1 \end{bmatrix}$$

$$T = \begin{bmatrix} (1+s^2 L_1 C_2) \left(1+\frac{sL_3}{R}\right) + \frac{sL_1}{R} & (1+s^2 L_1 C_2) sL_3 + sL_1 \\ sC_2 \left(1+\frac{sL_3}{R}\right) + \frac{1}{R} & s^2 C_2 L_3 + 1 \end{bmatrix}$$

$$T = \begin{bmatrix} \frac{s^3 L_1 L_3 C_2}{R} + s^2 L_1 C_2 + \frac{sL_3}{R} + \frac{sL_1}{R} + 1 & \frac{s^3 L_1 L_3 C_2}{sL_1} + \frac{sL_3}{sL_1} + 1 \\ sC_2 + \frac{s^2 L_3 C_2}{R} + \frac{1}{R} & s^2 C_2 L_3 + 1 \end{bmatrix}$$

$$\frac{v_o}{v_i} = \frac{1}{A} = \frac{1}{\underbrace{\frac{s^3 L_1 L_3 C_2}{R}}_1 + \underbrace{s^2 L_1 C_2}_2 + \underbrace{\frac{s(L_3+L_1)}{R}}_2 + 1}$$

$$\frac{v_o}{v_i} = \frac{1}{s^3 + 2s^2 \cancel{L_1 R} + 2s \cancel{\frac{L_1 L_3}{R}} + 1}$$