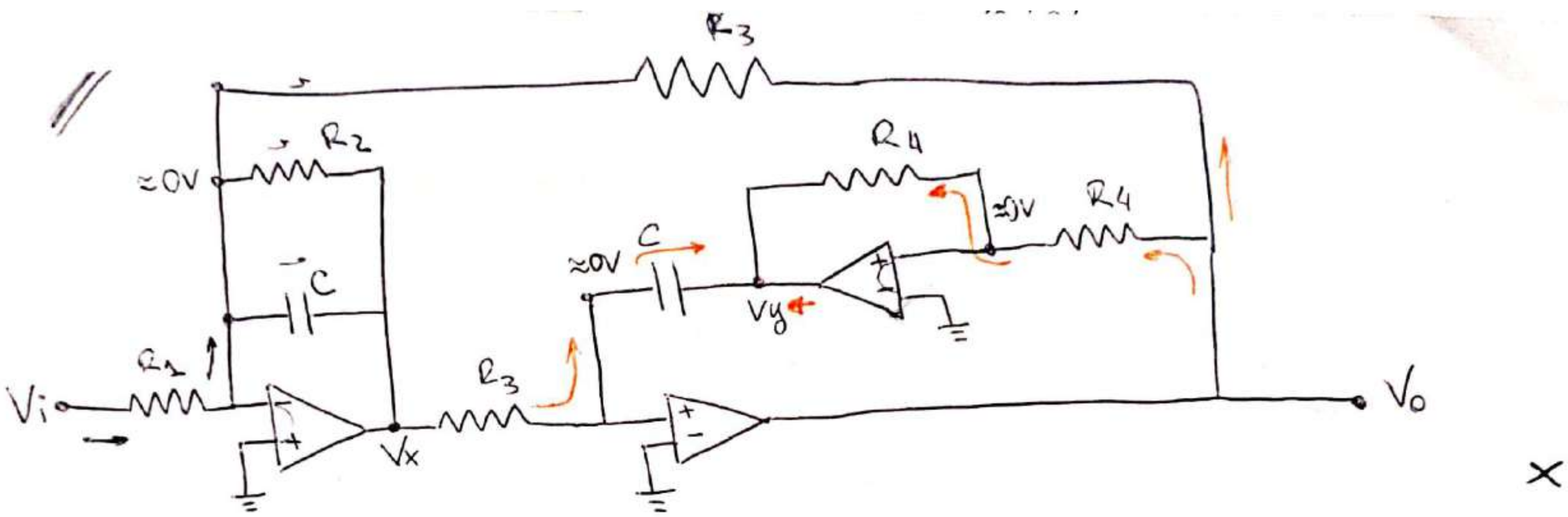

① $\underline{V_i} \cdot G_1 = V_x\,(G_2 + sC) + V_0\, G_3$

② $V_x\, G_3 = V_y \cdot sC \longrightarrow \boxed{V_x\, G_3 = V_0 \cdot sC} \rightarrow \left[V_x = V_0\, \frac{sC}{G_3}\right]$

③ $V_0\, \cancel{G_4} = V_y\, \cancel{G_4} \rightarrow \boxed{V_0 = V_y}$

$$V_i\, G_1 = V_0\, \frac{sC}{G_3}\,(G_2 + sC) + V_0\, G_3 = V_0 \left[\frac{sC}{G_3}\,(G_2 + sC) + G_3\right]$$

$$\cancel{V_i}\quad \frac{V_0}{V_i} = \frac{G_1}{\frac{sCG_2 + s^2C^2 + G_3^2}{G_3}} = G_1 G_3\, \frac{1}{s^2C^2 + sCG_2 + G_3^2} =$$

$$\frac{V_0}{V_i} = \frac{G_1 G_3}{C^2} \cdot \frac{1}{s^2 + s\,\frac{G_2}{C} + \frac{G_3^2}{C^2}} \rightarrow \boxed{T(s) = \frac{V_0}{V_i} = \frac{\frac{1}{R_1 R_3 C^2}}{s^2 + s\,\frac{1}{R_2 C} + \frac{1}{R_3^2 C^2}}}$$

$$T(s) = \frac{V_o}{V_i} = \frac{\frac{1}{R_1 R_3 C^2} \cdot \frac{R_3}{R_3}}{s^2 + s\frac{1}{R_2 C} + \frac{1}{R_3^2 C^2}} = \frac{R_3}{R_1} \cdot \frac{1/R_3^2 C^2}{s^2 + s\frac{1}{R_2 C} + \frac{1}{R_3^2 C^2}}$$

Si $W_o^2 = \frac{1}{R_3^2 C^2}$; $\frac{W_o}{Q} = \frac{1}{R_2 C}$ $\quad K = \frac{R_3}{R_1}$

Entonces:

$$T(s) = K \cdot \frac{W_o^2}{s^2 + s\frac{W_o}{Q} + W_o^2}$$

NORMALIZO $\rightarrow W_o = 1$

$W_o = \frac{1}{R_3 C} = 1 \rightarrow \boxed{C = \frac{1}{R_3}} \cdot W_o$ || $\frac{W_o}{Q} = \frac{1}{R_2 C} \rightarrow Q = R_2 \cdot \frac{1}{R_3}$

$\boxed{R_2 = Q \cdot R_3} \cdot W_o$

$\boxed{R_1 = \frac{R_3}{K}}$

- Tomo como $\Omega_Z = R_3$
- K es la ganancia de la banda de paso en veces.

- Para dB: $G_{dB} = 20 \log(K)$

- Red Normalizada