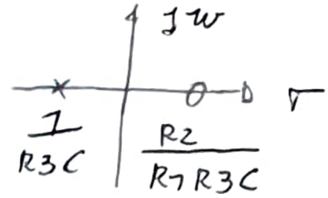
$$H(s) = \frac{s - \frac{R_2}{R_1 R_3 C}}{s + \frac{1}{R_3 C}}$$

Diagrama de polos y ceros




Cálculo de módulo y fase

$$H(\omega) = H(s)\Big|_{s=j\omega} = \frac{j\omega - \frac{R_2}{R_1 R_3 C}}{j\omega + \frac{1}{R_3 C}}$$

$$|H(\omega)| = \left| \frac{j\omega - \frac{R_2}{R_1 R_3 C}}{j\omega + \frac{1}{R_3 C}} \right| = \frac{\sqrt{\omega^2 + \left(\frac{R_2}{R_1 R_3 C}\right)^2}}{\sqrt{\omega^2 + \frac{1}{(R_3 C)^2}}}$$

$$\rightarrow \left[ |H(\omega)| = \sqrt{\frac{\omega^2 + \left(\frac{R_2}{R_1 R_3 C}\right)^2}{\omega^2 + \frac{1}{(R_3 C)^2}}} \right]$$

$$\theta(\omega) = \measuredangle H(\omega) ; \quad H(\omega) = \frac{|H_A(\omega)| \cdot e^{j\theta_A(\omega)}}{|H_B(\omega)| \cdot e^{j\theta_B(\omega)}} = |H(\omega)| \cdot e^{j(\theta_A(\omega) - \theta_B(\omega))}$$

$$\rightarrow \theta(\omega) = \operatorname{arc\,tg}\left( \frac{\omega}{\frac{R_2}{R_1 R_3 C}} \right) - \operatorname{arc\,tg}\left( \frac{\omega}{\frac{1}{R_3 C}} \right)$$

$$\left[ \theta(\omega) = \operatorname{arc\,tg}\left( \frac{\omega R_1 R_3 C}{R_2} \right) - \operatorname{arc\,tg}\left( \omega R_3 C \right) \right]$$