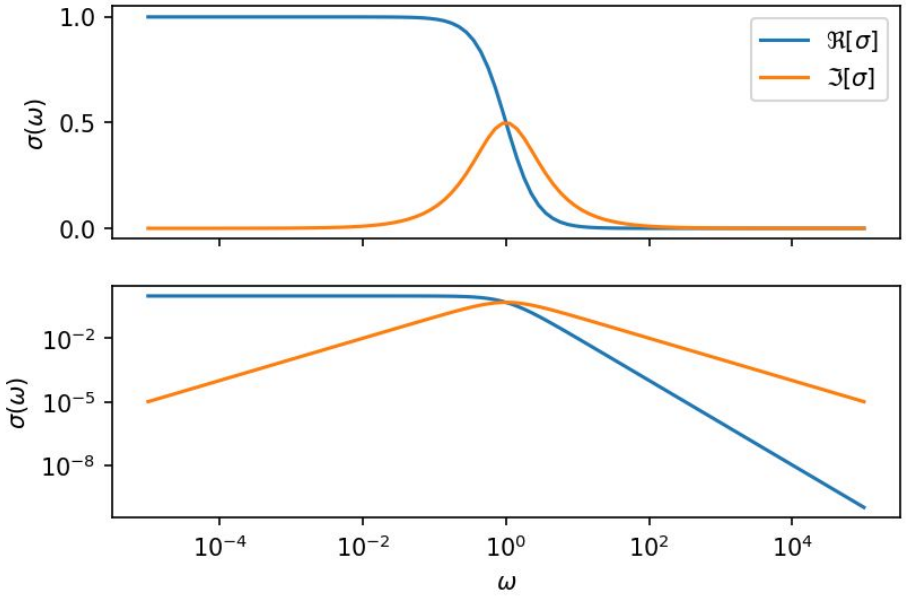
# conductividad:

$$\sigma(\omega) = \frac{\sigma_0}{1 - i\omega\tau}$$

y tomando $\sigma_0 = 1$, $\tau = 1$

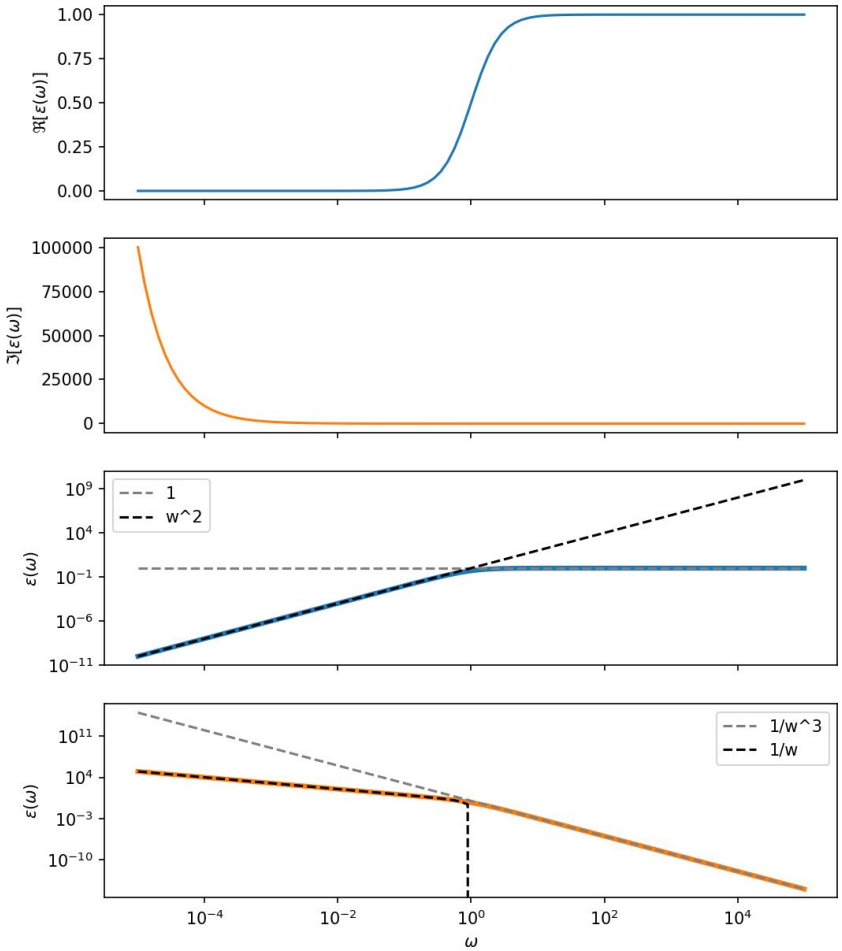
$$\Re[\sigma(\omega)] = \frac{1}{1+\omega^2}$$

$$\Im[\sigma(\omega)] = \frac{\omega}{1+\omega^2}$$



# permitividad:

$$\epsilon = 1 + i\frac{4\pi\sigma}{\omega}$$

$$\Re[\epsilon(\omega)] = 1 - \frac{1}{1+\omega^2}$$

$$\Im[\epsilon(\omega)] = \frac{1}{w(1+\omega^2)}$$