

$$V_L = I * (R_L + j\omega L)$$

$$R_T = R_L + R$$

$$V_{IN} = I * (R_L + R + j\omega L)$$

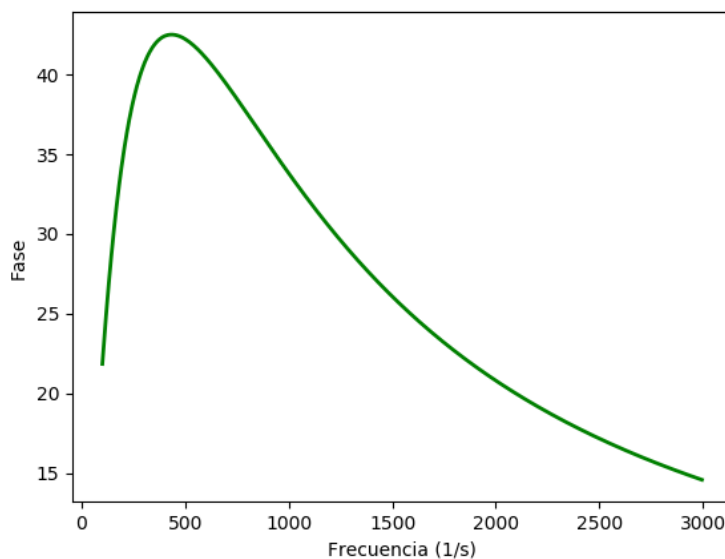
$$\frac{V_L}{V_{IN}} = \frac{R_L + j\omega L}{R_L + R + j\omega L} = \frac{(R_L R_T + \omega^2 L^2) + j\omega L R}{R_T^2 + \omega^2 L^2}$$

$$T = \left| \frac{V_L}{V_{IN}} \right| = \frac{\sqrt{(R_L R_T + \omega^2 L^2)^2 + (\omega L R)^2}}{R_T^2 + \omega^2 L^2}$$

$$\varphi = \arctan\left(\frac{\omega L R}{R_L R_T + \omega^2 L^2}\right)$$

Comportamiento de la fase:

frecuencia de corte=986Hz



$$R = 50 \Omega$$

$$R_L = 12 \Omega$$

$$L = 0.01 \text{ H}$$