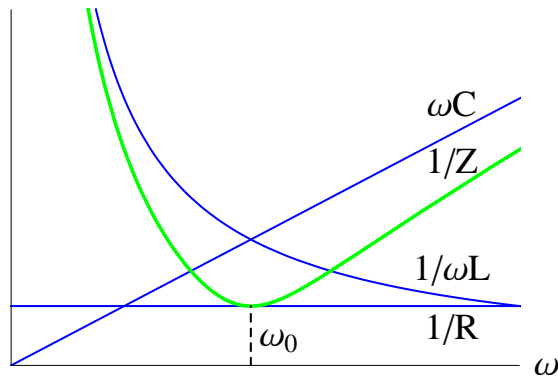


RLC Parallel Resonance (1)



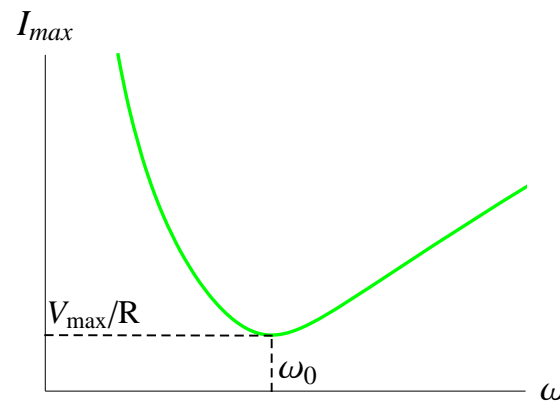
impedance

$$\frac{1}{Z} = \sqrt{\frac{1}{R^2} + \left(\omega C - \frac{1}{\omega L}\right)^2}$$



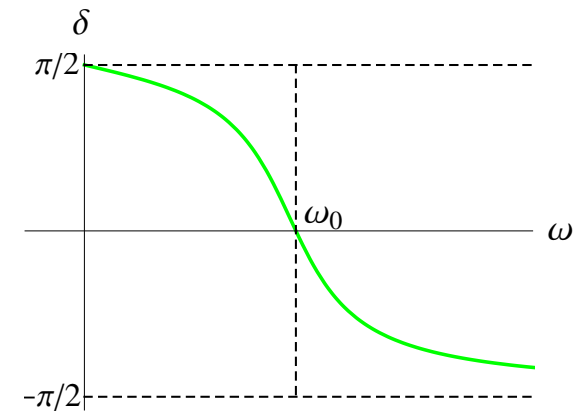
current

$$I_{max} = \frac{V_{max}}{Z}$$



phase angle

$$\delta = \frac{1/\omega L - \omega C}{1/R}$$



resonance angular frequency:

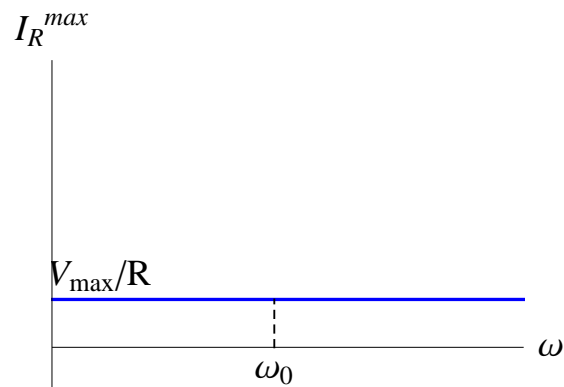
$$\omega_0 = \frac{1}{\sqrt{LC}}$$

RLC Parallel Resonance (2)



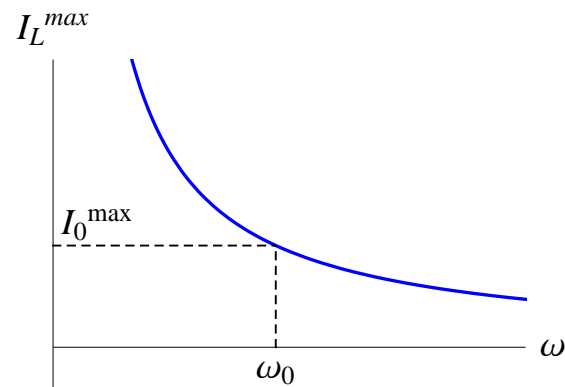
resistor

$$I_R^{max} = V_{max}/R$$



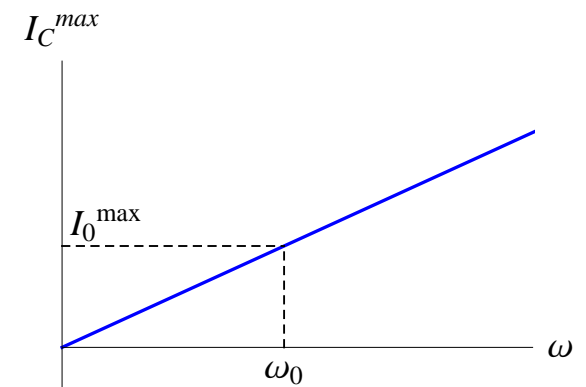
inductor

$$I_L^{max} = V_{max}/\omega L$$



capacitor

$$I_C^{max} = V_{max} \omega C$$



currents at resonance:

$$I_R^{max} = \frac{V_{max}}{R}, \quad I_L^{max} = I_C^{max} = I_0^{max} = V_{max} \sqrt{\frac{C}{L}}$$