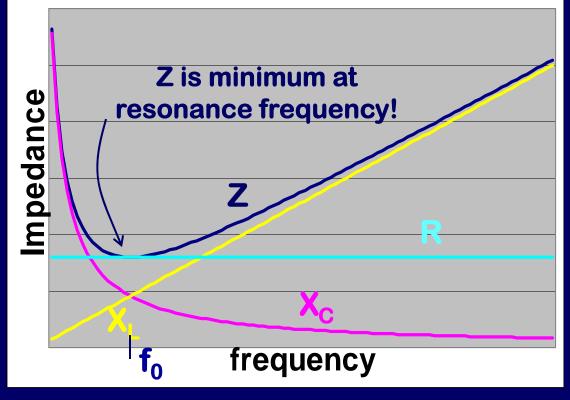
Resonance



R is independent of f X_L increases with f $X_L = 2\pi f L$ X_C decreases with f $X_C = 1/(2\pi f C)$

Z: X_L and X_C subtract $Z = \sqrt{R^2 + (X_L - X_C)^2}$

Resonance in AC Circuits



Resonance: $X_L = X_C$

$$f_0 = \frac{1}{2\pi\sqrt{LC}}$$