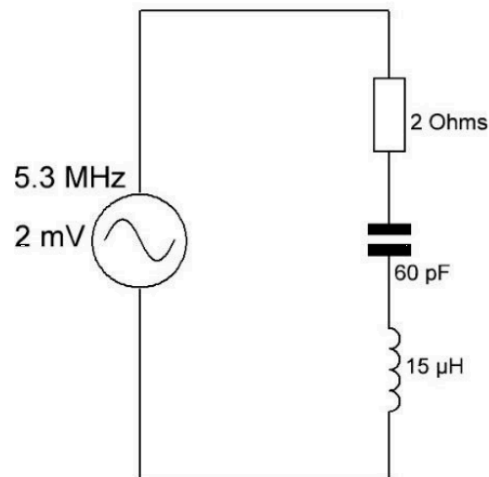


In this circuit, the resonant frequency is 5.3MHz and there is an RF supply of just 2mV across the series circuit. Q MAGNIFICATION hinges on the fact that when a series tuned circuit is at resonance, the reactances  $X_L$  and  $X_C$  are equal and opposite, so they cancel each other.



what is Q-factor?

voltages and circulating currents in tuned circuits can be very high...

Apply the formula for Q factor given circuit component values...

Recall the definition of the half power point of resonance curves...

Apply the equation for  $Q$  given the resonant frequency and the half power points on the resonance curve...