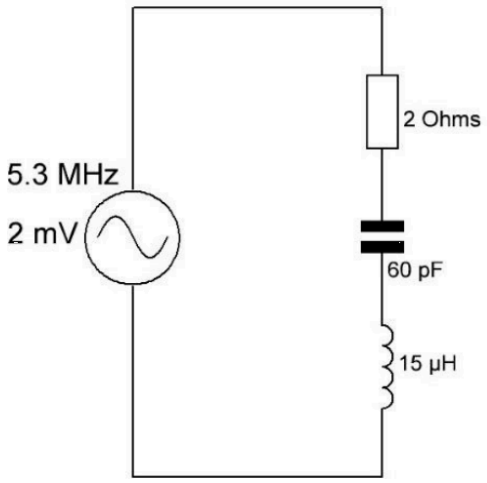
2h.4 • Q Magnification • 000 • hQ5vWwHT

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.



2h.4 • Q factor • • SIT3M950

what is Q-factor?

2h.4 • Tuned circuit • 000 • TuDkF5TC

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

2h.4 • Tuned circuit • 000 • bSZoHasf

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

2h.4 • Tuned circuit • 000 • ck-ql2VL

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

2h.4 • Tuned circuit • 000 • pnYosChc

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