

NETWORKS LAB (EE 351)

EXPERIMENT NO 3.A

Frequency response of RLC parallel circuits

OBJECTIVE: To study the variation in current and capacitor voltage with the change in frequency in a RLC parallel circuit.

EQUIPMENT: Variable frequency signal generator, resistor inductor, capacitor, ammeter and voltmeter.

CIECUIT DIAGRAM:

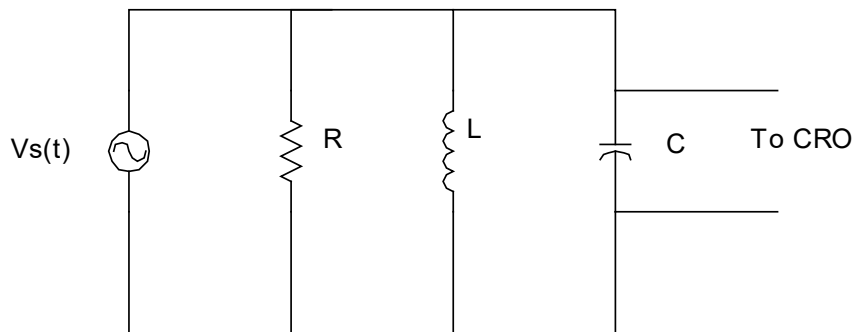


Fig. A

PROCEDURE:

1. Connect the circuit as shown in figure. A.
2. By varying the frequency, tabulate the reading of resistor voltage and capacitor voltage.
3. Get the current in circuit by dividing resistor voltage by resistance.
4. Plot the graph between frequency and current.
5. Calculate the value of different parameter listed and verify them with measured ones.

MODEL GRAPH:

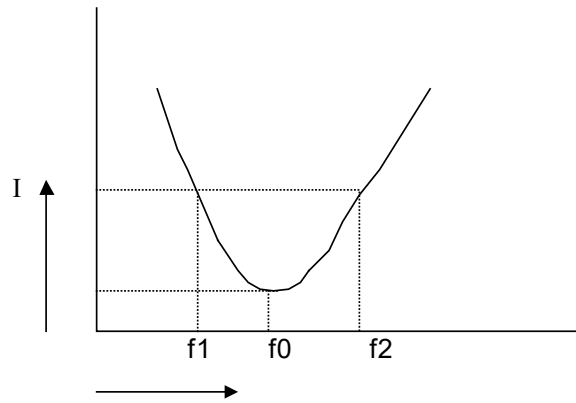


Fig. B

$$B.W=f_2-f_1$$

$$Q= (W_0L)/R/ (W_0RC)$$

TABULATED FORM:

Frequency	Resistance	Inductance	Capacitance	Capacitor voltage	Resistor voltage	V_r/R