University College Dublin

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PHYC20090 Electronics and Devices

Experiment No.7 Sinusodial Response of the LCR Resonant Circuit

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Abstract

The aim of this experiment was to

1 Theory

1.1 LCR Circuits

An LCR circuit is made up of inductors (L), capacitors (C), and resistors (R), usually connected in series. Since all the components of the circuit are connected in series, equal amount of the current will flow through each element. [1]

A circuit containing these components, L, C, and R, can act as themselves individually at certain frequencies [2], §1.2.1. The LCR circuit can also magnify the voltages across the L, C, and R such that it is larger than the circuit's input voltage (ie. AC) [2].

1.1.1 Inductance, Capacitance, Resistance

Inductance, capacitance, and resistance make up the basic parameters that can affect circuits up to some degree [3].

Inductance is a property of a conductor and its [4]

1.2 Wave Properties

1.2.1 Resonance

2 The Procedure

3 Results and Calculations

4 Conclusion

5 Expansion on the Experiment

References

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Appendix

Raw Data