

Lab 2 – Abstract

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The aim of this laboratory was to experimentally determine the capacitance, inductance and resistance of a capacitor and inductor, and compare these with measured values from a DMM. Values were obtained by constructing RL and RC circuits, and varying the frequency of an applied AC voltage. The inductor's resistance was measured as $R_L = 25.49\Omega$, compared to an expected value of 24.5Ω . The inductor's inductance was measured as $L = 10.15\text{ mH}$, compared to an expected value of 10.00 mH . The capacitor's capacitance was measured to be $C = 0.4639\mu\text{F}$, compared to an expected value of $0.464\mu\text{F}$. The experiment was a success since all data except R_L agree with the expected values within error. The increased resistance that was measured in the circuit may be attributed to parasitic resistance in the breadboard/wires.