

EE236: Experiment No. 1

RC Circuits

Aaron John Sabu, 170070050

July 23, 2018

1 Overview of the experiment

1.1 Aim of the experiment

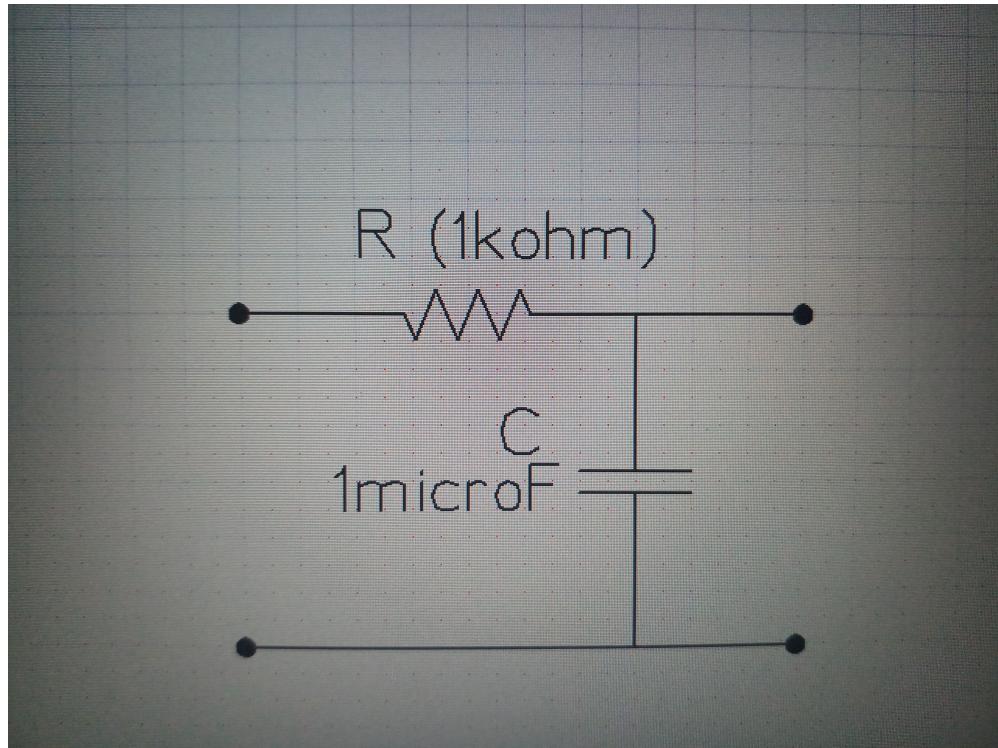
The experiment deals with the design of an RC circuit and explains how the circuit acts as a low-band pass filter when voltage is obtained across the capacitor V_C .

1.2 Methods

The resistor and capacitor were placed on the breadboard as per the circuit diagram and wires connected the Digital Storage Oscilloscope (DSO - TSD1002) and Function Generator to the components. The Function Generator was set to provide a square wave (as per the question), and various frequencies and DC offsets were placed as per requirement. Measurements were obtained from the DSO in the form of graphs with V_{IN} displayed via Channel 2 and V_{OUT} via Channel 1.

2 Design

The circuit diagram for the circuit which was tested is given below:



3 Experimental results

3.1 Part-1

The experiment displayed the low-band pass filtering of the RC circuit. Certain graphs have been attached below.

4 Experiment completion status

The first part of the experiment was completed, although certain images have not been added in order to avoid redundancies. Part 2 and the simulation have not been completed.

