

Martin Alejo

#75296665

December 9, 2022

Mini Project 4

University of British Columbia

Electrical and Computer Engineering

**ELEC 301** 

Instructor: Nicolas Jaeger

Martin

## Contents

List of Figures

List of Tables

## 1 Introduction

For this project, we will be using SPICE software to simulate active filters and oscillators.

## 2 Part A

For this part, we will be designing a 2nd order Butterworth low pass active filter using the UA741 operational amplifier.

Here is the circuit that we will be using for this part:

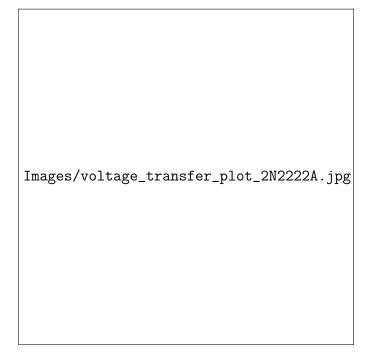


Figure 1: Second Order Butterworth Filter

The calculations to find the resistance  $R_1, R_2$  and capacitance C, we will be using the formulas from the class notes [1].

- 3 Part B
- 4 Part C
- 5 References
- 1. ELEC 301 Class notes
- 2. Mini Project 4 Document
- 3. Standard Resistor and Capacitor Values (Canvas)
- 4. Circuit Maker SPICE Model