

DC And AC Currents Through LCR Circuits

PHY224 Fall 2021

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Abstract

1 Introduction

A. Background Theory

B. Materials and Methods

2 Results

A. Transient Decay (RC)

B. DC Square Wave

C. AC Sine Wave

3 Uncertainty

4 Discussion

A Appendix

A.1 Oscilloscope Readings

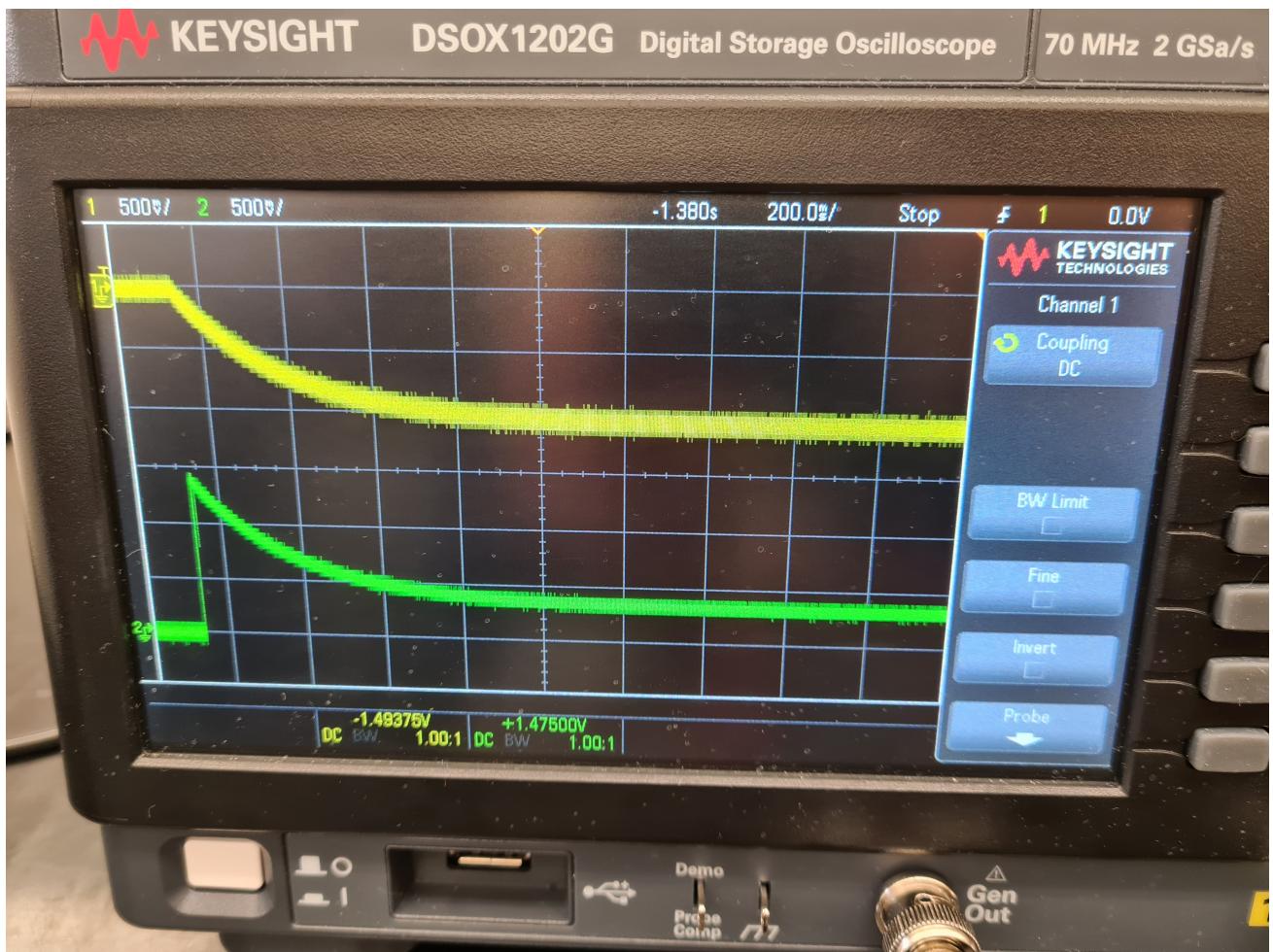


Figure 1: Oscilloscope Reading (Peak to Peak Alignment)

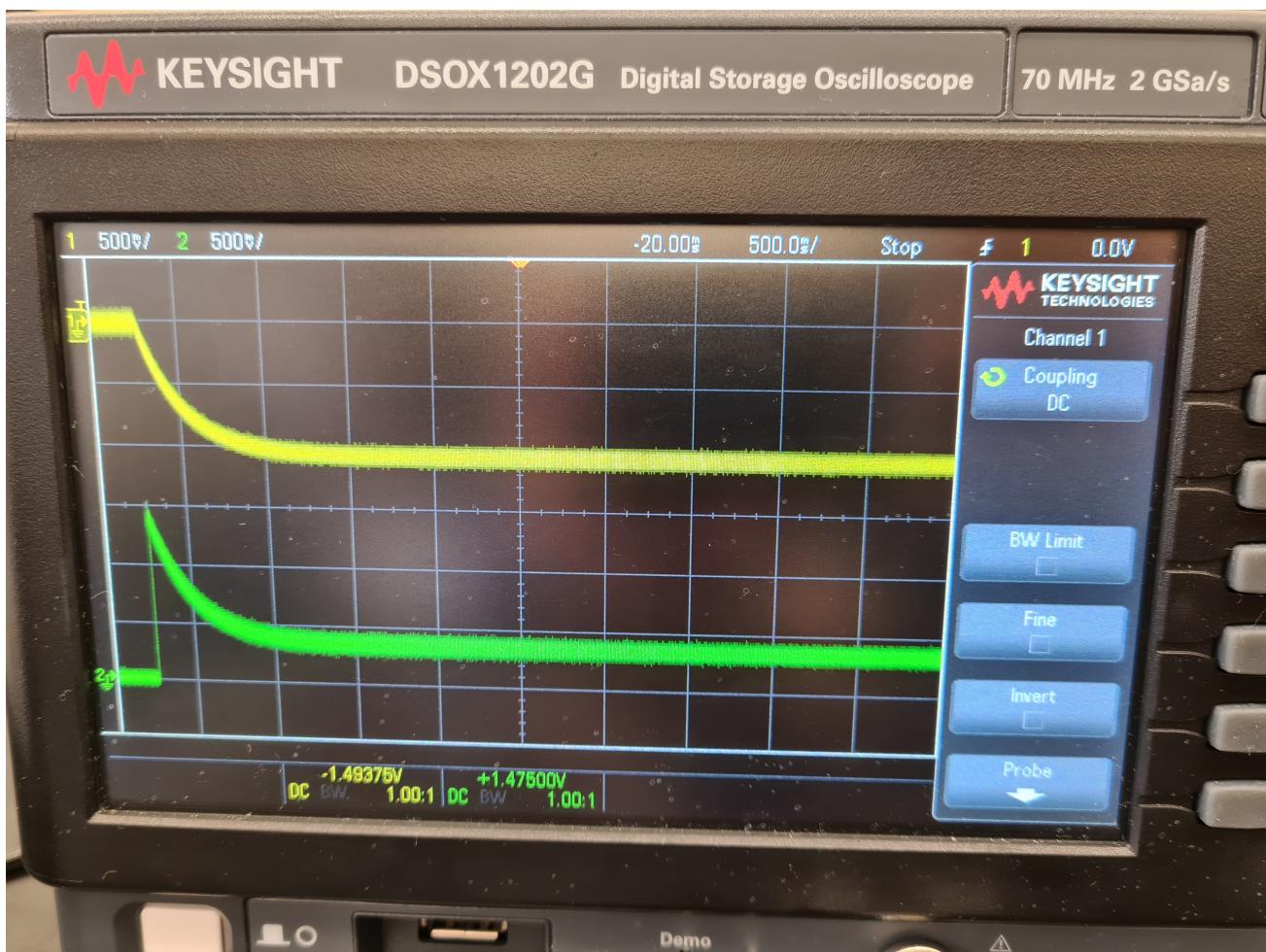


Figure 2: Oscilloscope Reading (Peak to Peak Alignment)

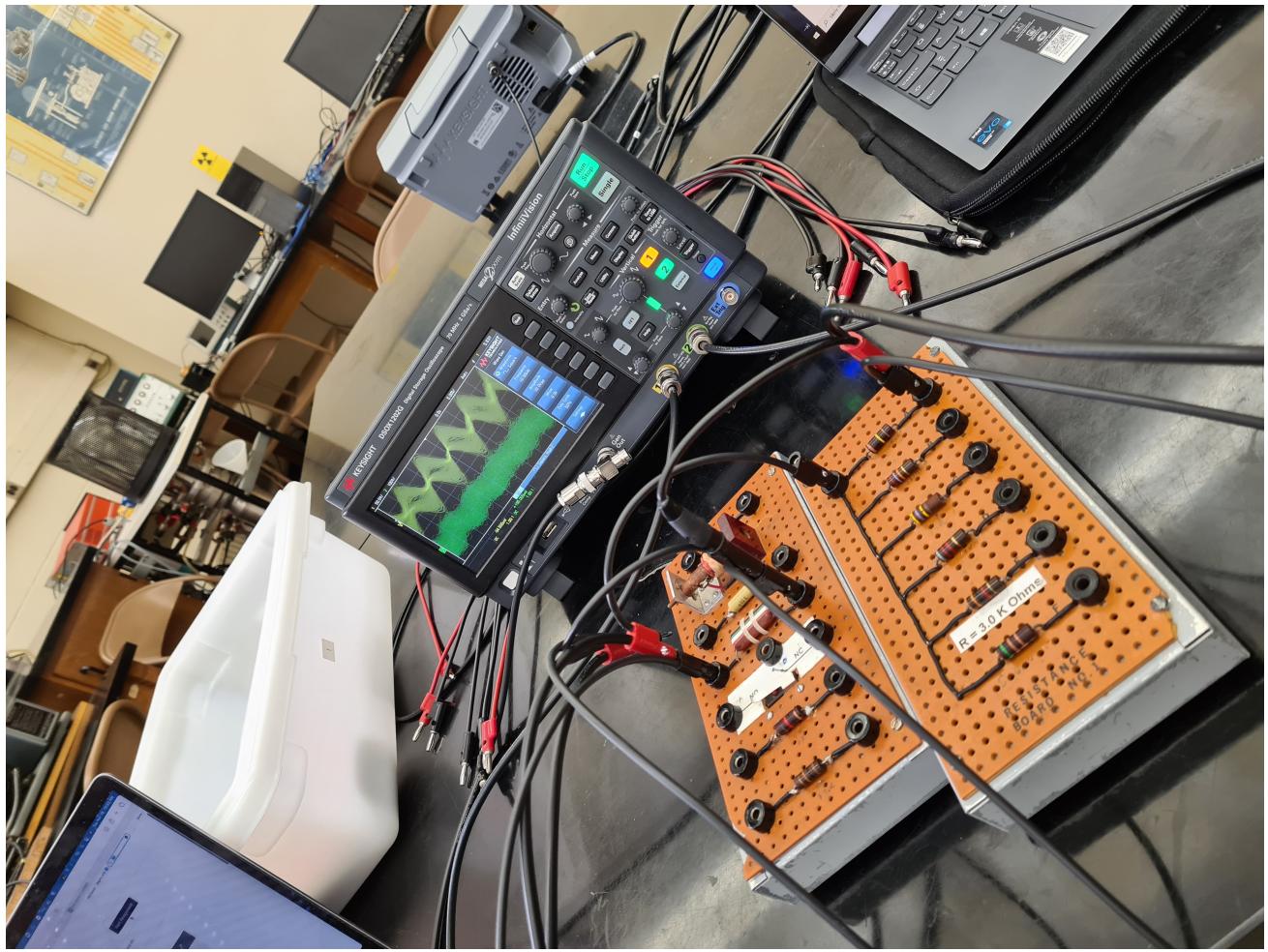


Figure 3: Oscilloscope Reading (Peak to Peak Alignment)



Figure 4: Oscilloscope Reading (Peak to Peak Alignment)



Figure 5: Oscilloscope Reading (Peak to Peak Alignment)

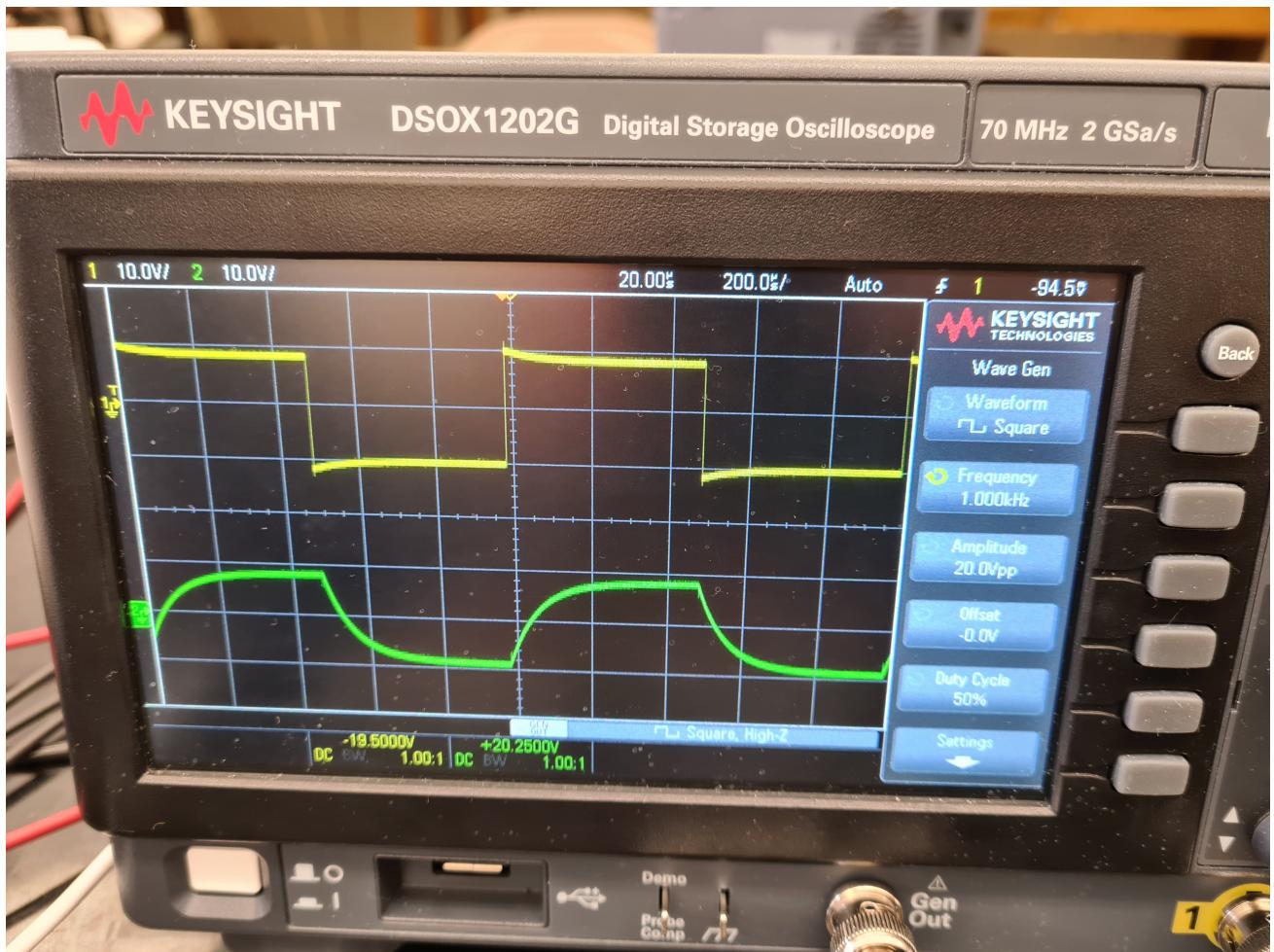


Figure 6: Oscilloscope Reading (Peak to Peak Alignment)

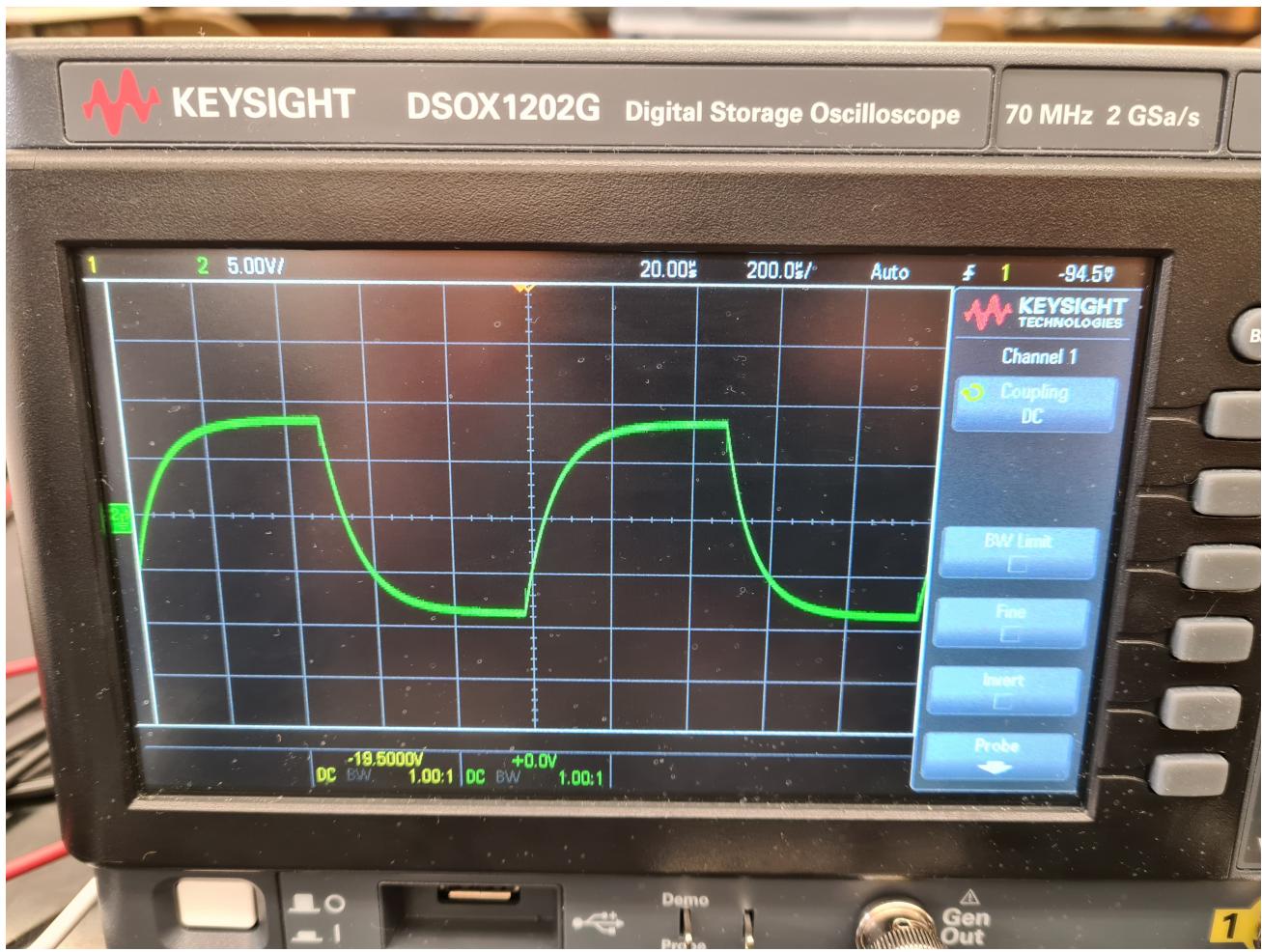


Figure 7: Oscilloscope Reading (Peak to Peak Alignment)

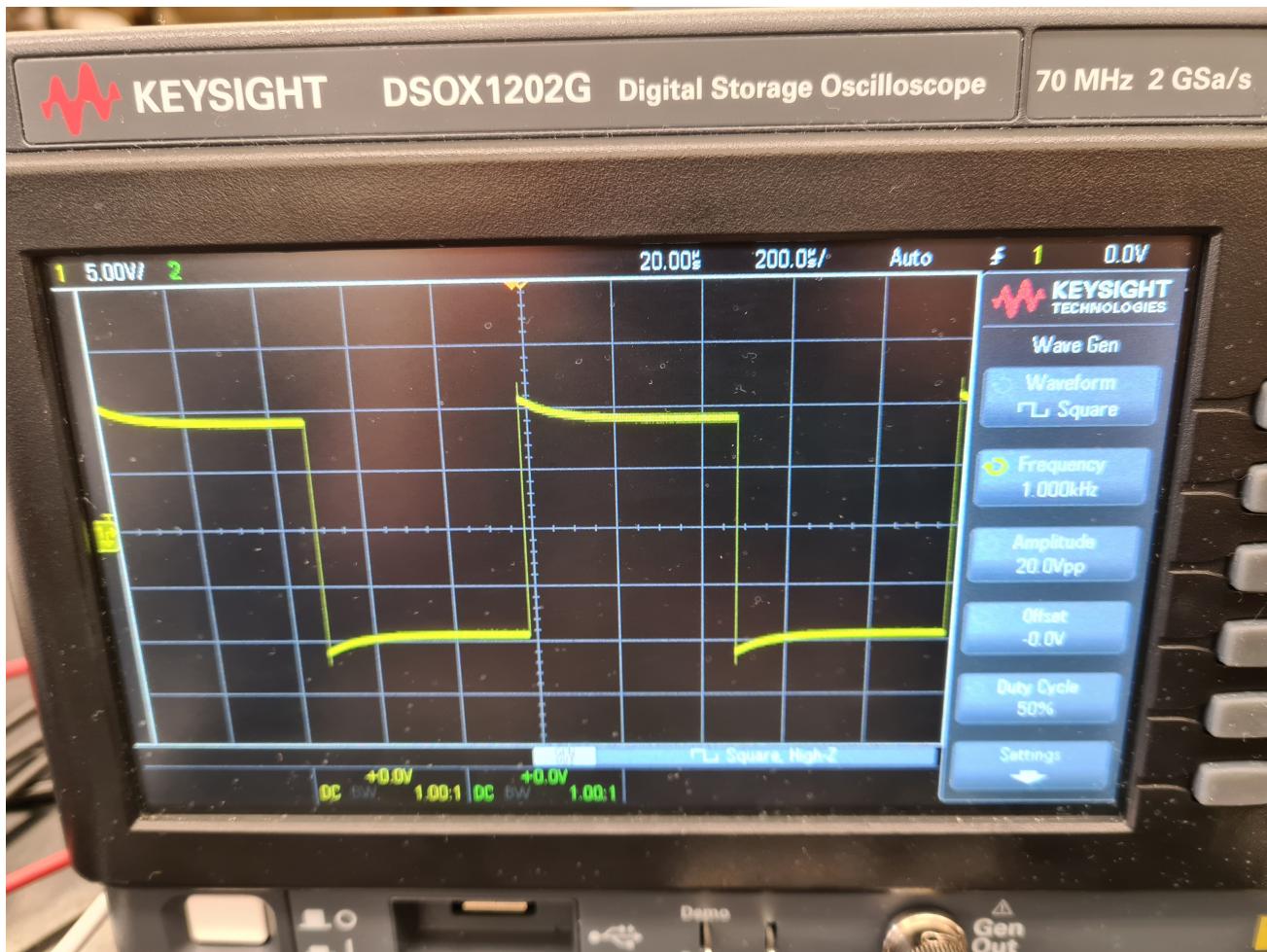


Figure 8: Oscilloscope Reading (Peak to Peak Alignment)

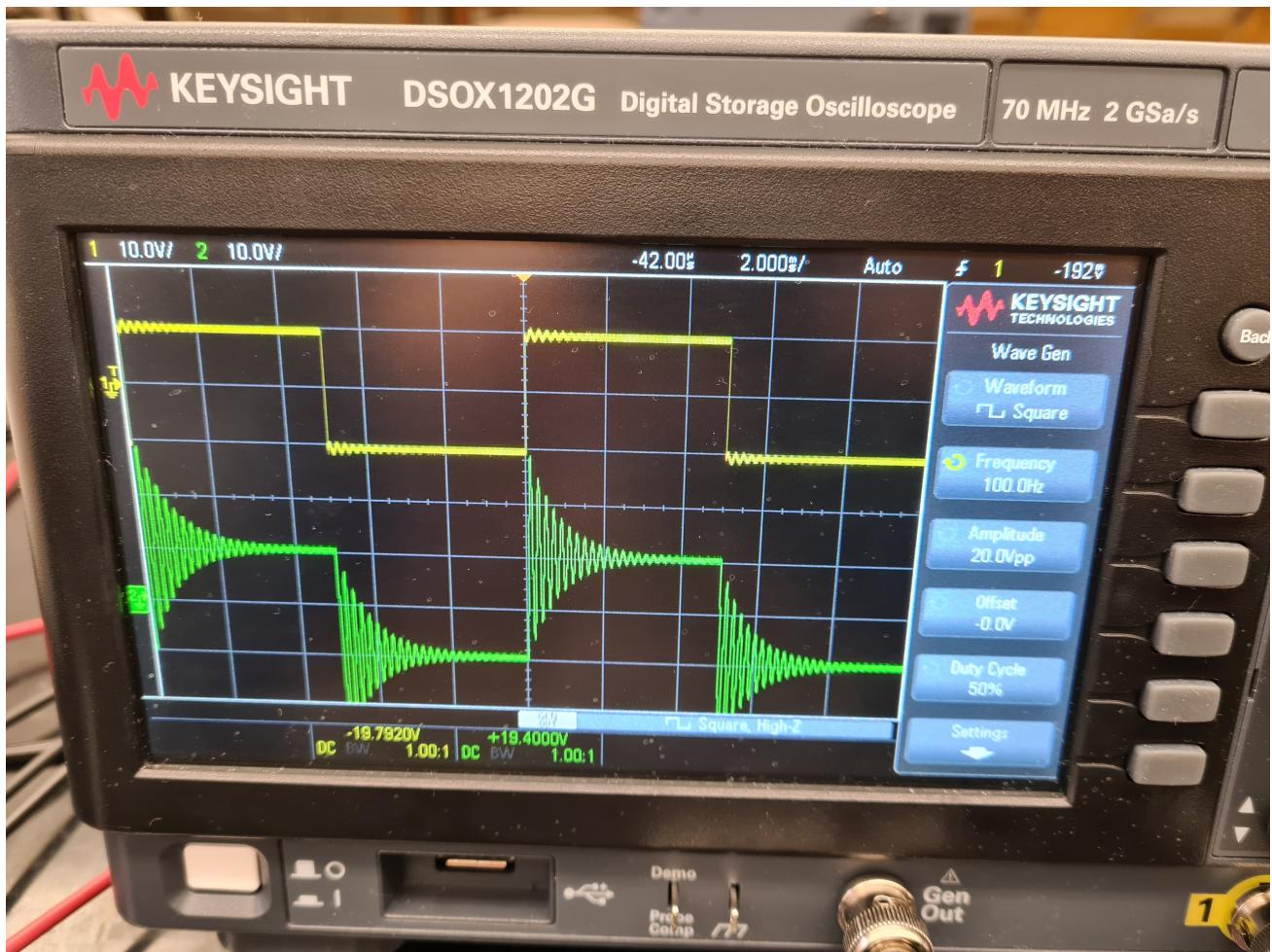


Figure 9: Oscilloscope Reading (Peak to Peak Alignment)

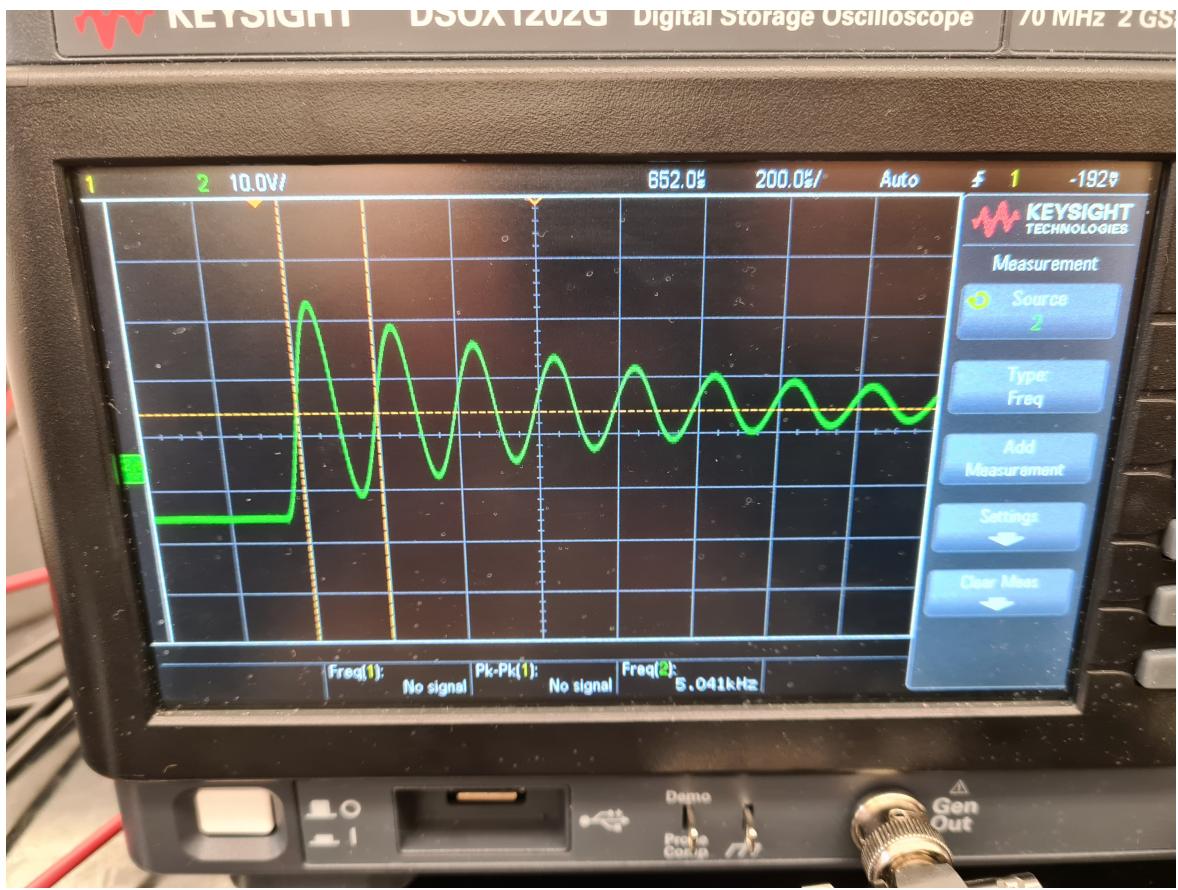


Figure 10: Oscilloscope Reading (Peak to Peak Alignment)

A.2 Python Code

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References

- [1] Currents in LCR - currents-l-c-r.pdf