

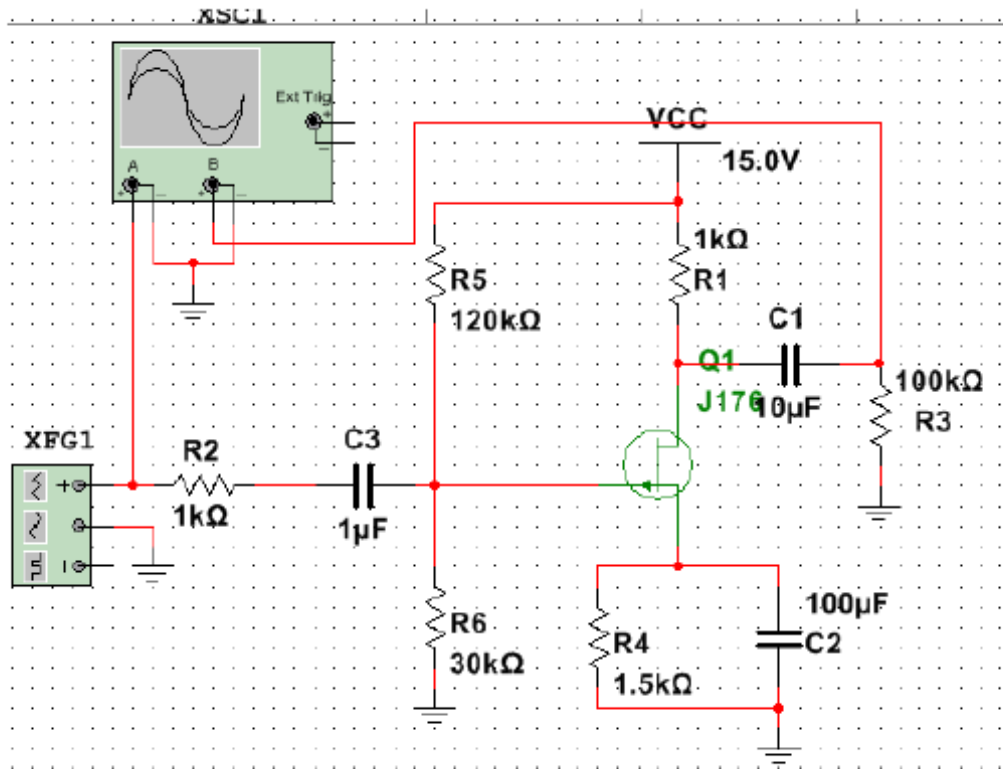
Lab 12 Report  
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EE 316

## **Gain and Bandwidth Characteristics of MOSFETs**

## Hardware

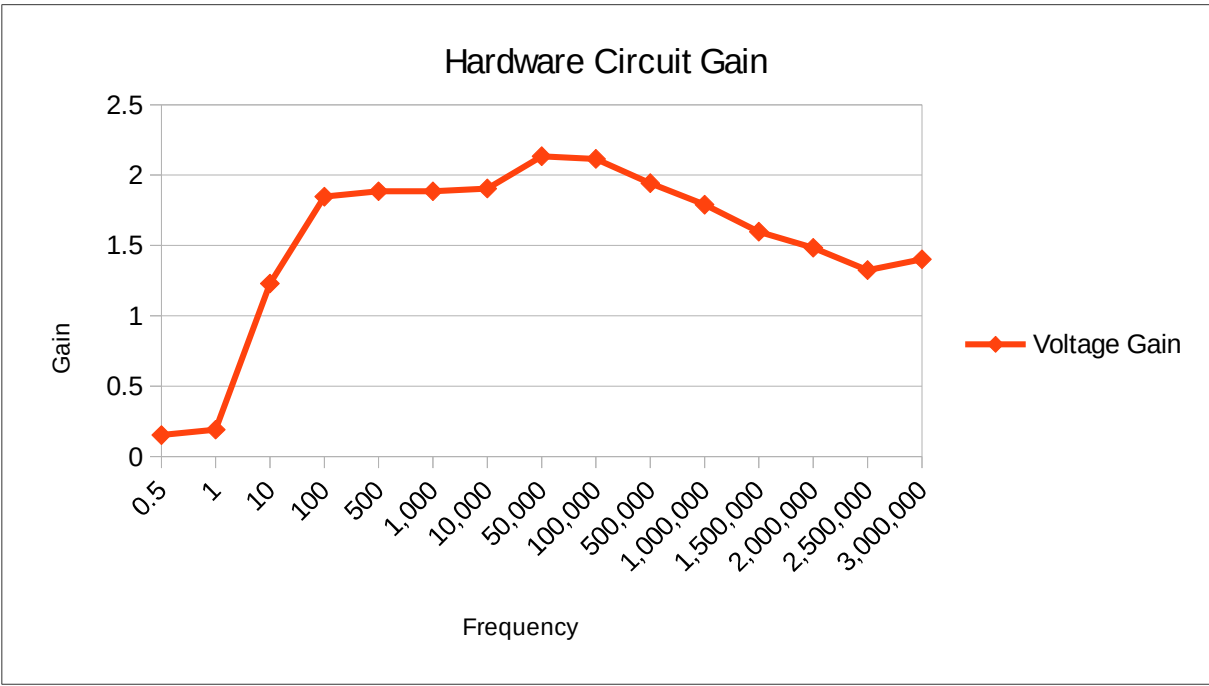
The hardware circuit was constructed from the following model and tested against a range of frequencies.

Circuit Model



Hardware Results

Frequency (Hz)	Vout (Vpk-pk)	Voltage Gain
0.5	0.032	0.15
1	0.040	0.19
10	0.257	1.23
100	0.386	1.85
500	0.394	1.89
1,000	0.394	1.89
10,000	0.398	1.9
50,000	0.446	2.13
100,000	0.442	2.11
500,000	0.406	1.94
1,000,000	0.374	1.79
1,500,000	0.334	1.6
2,000,000	0.310	1.48
2,500,000	0.277	1.33
3,000,000	0.293	1.4



## Conclusion

In this lab we saw a modest amplification of the input frequency across a wide portion of the tested bandwidth. The circuit output's low variation lends itself to applications with less constraints on the input frequency and requirement for some slight amplification in the 1-2 V/V range.