Experiment No. 6
BJT Amplifier
ECE 311

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Instructor: Professor Saletta

1 Introduction

This lab will build and test a common emmiter type BJT amplifier.

2 Procedure

a. Build and test BJT amplifier

3 Equipment

- Oscilloscope
- Function Generator
- 2N3404
- Resistors

4 Observations

The sine wave output by the amplifier had very odd artifacts on the scope. It is not known wether these were simply sampling errors or output errors of the scope. Additionally, the output amplification was around 75, whereas the preliminary computations predicted around 110.

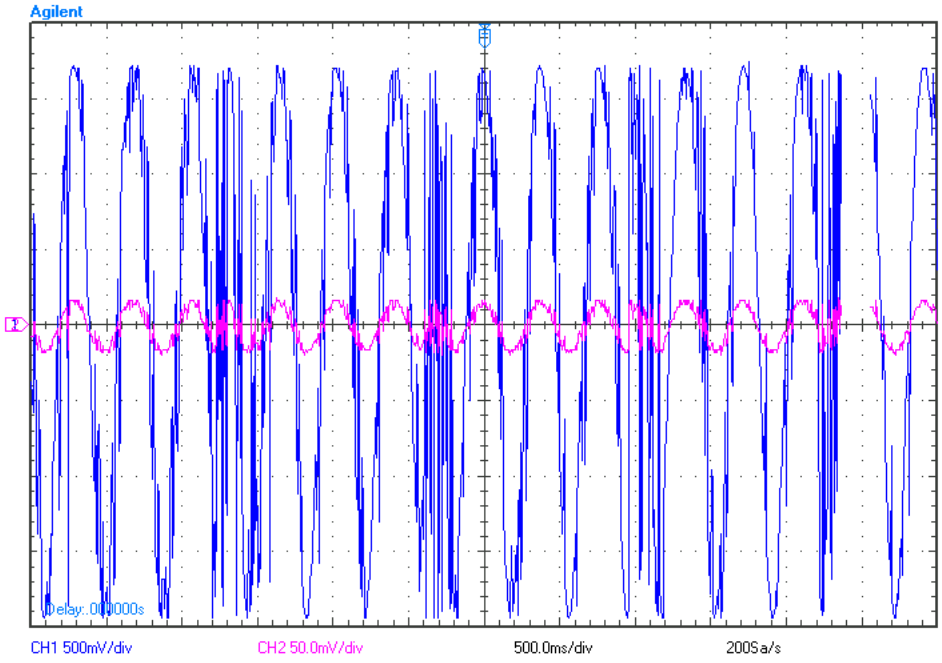

Figure 1: Signal Displayed Using Y-T Timebase

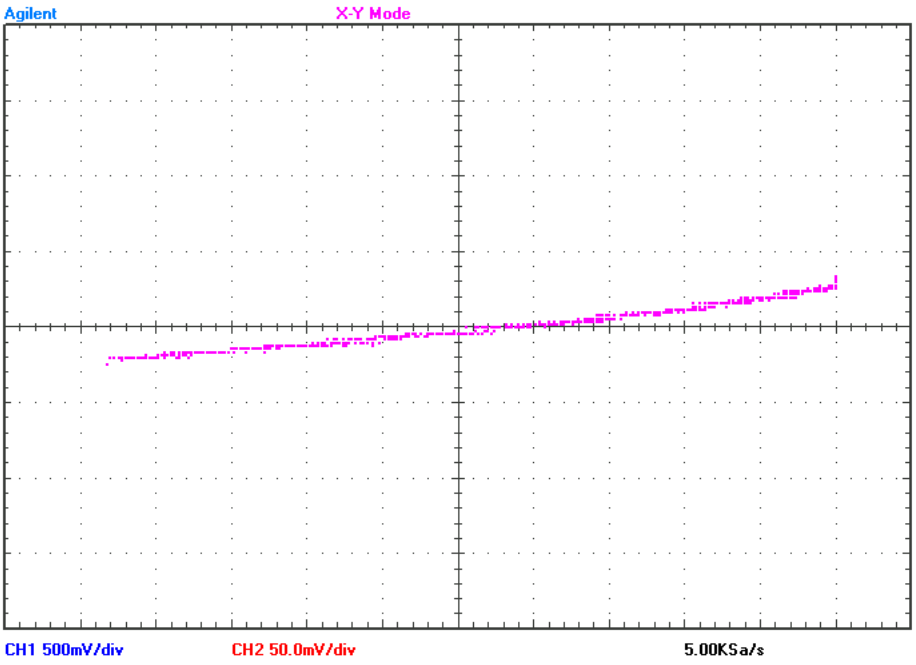

Figure 2: Lissajous Figure Showing Non-Linearity

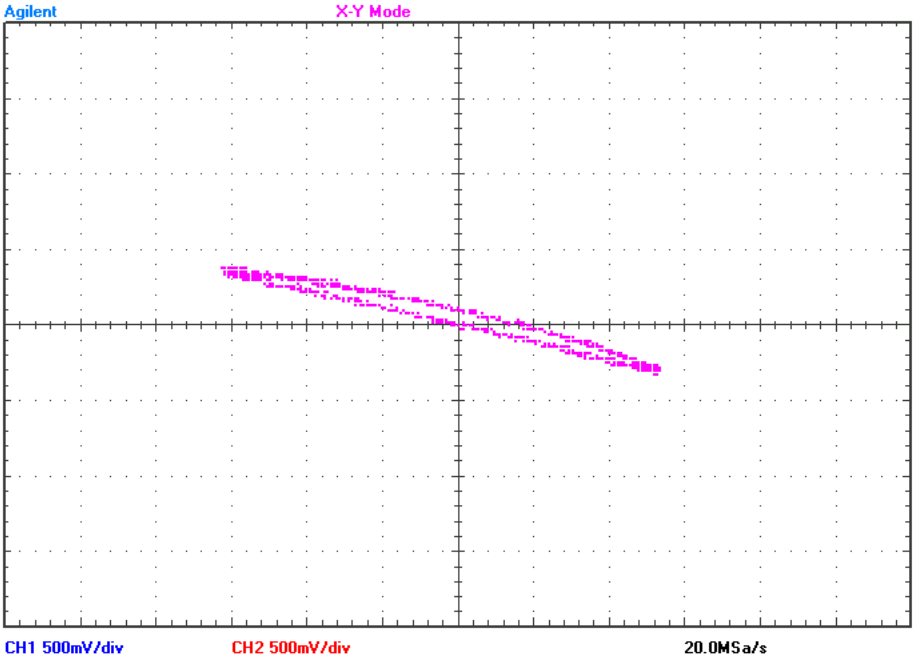

Figure 3: Lissajous Figure at Test Frequency

5 Conclusions

The purpose of this lab was achieved. A number of biasing circuits were tested. The β of a BJT was measured.