# EEE109 Lab 3

# Frequency Response of A BJT Amplifier

# (Lab Report Template)

**Group members:** *Student Name 1\*, Student Name 2*

**Student IDs:** *Student ID 1\*, Student ID 2*

**Group ID:***The same as in Lab #1&2 (specify grouping modification if applicable)*

**Submission date:** *dd/mm/yyyy*

*Student whose name marked by \* submits the report on behalf of the group.*

### *Abstract (Italic, font: Times New Roman, font size: 14, line spacing: 1.5)*

*(Italic, font: Times New Roman, font size: 11, line spacing: 1.5)*

*A short section of between 50 and 300 words which must be capable of being read and understood independently of the rest of the report. This section should briefly summarise the purpose and scope of the experiment, the experimental procedures that were carried out, and the main conclusions.*

### Introduction (font: Arial, font size: 14, line spacing: 1.5)

(Font: Arial, font size: 11, line spacing: 1.5)

It is a brief section, which describes, in general terms, the scope of the experiment and its relevance to the field of study you are engaged in. A statement of objectives should be given along with general comments about how the experiment will be carried out.

\*Add subtitles/subsections if required for all sections, for example:

* 1. Subtitle (font: Arial, font size: 12, line spacing: 1.5)

(Font: Arial, font size: 11, line spacing: 1.5)

Add contents of the subsection 1.1.

* 1. Subtitle

Add contents of the subsection 1.2.

### Theory

The section describes the theoretical background to the experiment and maybe anticipates some of the expected results.

### Circuit Design

Details should be given of any circuit design that was carried out.

### Experimental Method

The section gives details of what equipment was required and how it was used. Details should be given of how measurements were made.

### Results and Calculation

The section presents experimental readings in tabular form with estimates of reading errors.

Calculations based on experimental readings should be presented in a form, which allows them to be checked.

Graphs are normally more informative than tabular results and should be presented whenever appropriate, even when not specifically requested.

### Discussion

The section is designated to give an assessment of the significance and reliability of the results, to consider the implications of experimental errors and to propose possible alternative approaches and further experiments that could be carried out.

### Conclusion

The section provides a concise statement of what has been learnt from or confirmed by the experiment. This section must be consistent with earlier sections.

### References

List any references to the work of others you have cited (e.g. articles, reports, studies, standards), and any explanatory notes. Provide URLs for any materials available on the web.

The references will follow an IEEE style as shown in the examples.

**Books**

[1] J. K. Author, “Title of chapter in the book,” in Title of His Published Book, xth ed. City of Publisher, Country if not USA: Abbrev. of Publisher, year, ch. x, sec. x, pp. xxx–xxx.

**Journals**

[2] J. K. Author, “Name of paper,” Abbrev. Title of Periodical, vol. x, no. x, pp. xxx-xxx, Abbrev. of Month, year.

**Conference Technical Articles**

[3] J. K. Author, “Title of paper,” in Unabbreviated Name of Conf., City of Conf., Abbrev. State (if given), year, pp.xxx-xxx.

**Online Sources**

[4] J. K. Author, (year, Month. day). Title of web page [Online]. Available: URL [http://www.../..../.../doc/text.](http://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=126387&org=NSF&from=news)

### Appendix A: Graphics: Graphics provide illustrated information to readers. In general, graphics are designed to make it easier for readers to understand your report. Deciding when to insert a graphic depends on the information you need to convey. You should not have “orphan” figures; you need to refer to these figure/graphs in the text. You should plot all your data and tabulate them, and label them properly. You should labels all the axis with the proper units; each figure should have a title.

### Appendix B: ****Marking Scheme****

|  |  |  |
| --- | --- | --- |
| **Marks** | **Student A** | **Student B** |
| **5% (Team Work)** | Abstract | |
| **5% (Team Work)** | Introduction | |
| **70% (Individual Work)** | **Part A (Common Emitter)** | **Part B (Common Collector)** |
| **10%** | Theory | Theory |
| **20%** | Circuit Design | Circuit Design |
| **20%** | Experimental Method | Experimental Method |
| **20%** | Results and Calculation | Results and Calculation |
| **10% (Team Work)** | Discussion | |
| **5% (Team Work)** | Conclusion | |
| **5% (Team Work)** | Reference | |

**\*Please follow this template when editing your Lab 3 Report. The font, font sizes and line spacing are defined explicitly in the template. Please do not alter them freely. The report STRUCTURE should be followed STRICTLY. Please DO NOT modify the MAIN section titles. You may add subsections/subtitles as necessary. Marks are allocated to the sections explicitly.**