En resa mot Svartåns djupa mörker

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abstract

I. Introduction

The subject of this report is the procedure of designing and producing a step up converter in the form of a printed circuit board. This report will explore the procedures required for developing such a printed circuit board being, choice of components, circuit design, printed circuit board layout, printing the board and testing of the board but also the difficulties and and was was learned throughout the project. The goal of the project was to successfully produce a step up converter using the tools at hand. But also to get the understanding of some of the difficulties one can encounter in the process. jdhfuhdjhdjdfh

Explain the subject. What was i studying? Why was this topic important to investigate? What did we know about the topic before I did this study? How will this study dvance new knowledge or new ways of understanding?

- Generally known information about the topic
- Prior studies' historical context to your research
- Your hypothesijks and overview of the results
- How the article is organized

A. State of the Art

The latest and most sophisticated or advanced stage of a technology or science. State of the art if the foundation for determining the methid and methodlogy.

B. Hypothesis

In scienc, a hypothesis is an idea or explanation that you then tesr through study and experimentation. Outside science, a theory or quess can also be called a hypothesis

C. Research questions

A research question guides and centers your research. It should be clear and focusd, as well as synthesize multiple sources to present your unque argument. RQ should be furmulat

II. Hardware

- MyDAQ
- Voltera Printer

III. Software

- Multisim
- Ultiboard
- Voltera

IV. Method

A. Problem formulation

ja det verkar som att problemformuleringen ska vara här *The problm formulation is defined upon hypothesis to define the problem or problems for the thesis How will you test the hypothesis? What methods will be used from the knowledge learned in state of the art?*

The PCB was tested using the National Instruments *myDAQ*, by imposing a square wave with following characteristics:

- Constant 5V amplitude.
- Constant 2.5V positive offset.
- Variable frequency $100Hz - 10kHz$
- Variable duty-cycle $10\% - 90\%$

and then measuring the output

V. Results

What are the results your method have given?

VI. Conclusion

Have you provn or disproven the hypothesis? If not, why?

VII. Discussion

References

[1] H. Kopka and P. W. Daly, *A Guide to LaTeX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.