sdmay23-29: Building blocks and sub-circuits with magnetic field generators

Week 6 Report
October 20 - October 26

Team Members

Andrew Murphy — Circuit and MOSFET selection
William Nichols — Circuit and Comsol Software
Michael Lopez — Circuit and Optical Design
Steven Huynh — Circuit and MOSFET selection
Umair Sarwar — Circuit and Comsol Software

Summary of Progress this Report

For this week, the team was tasked with splitting into two groups. One group works on the Simulink side of the project along with getting accustomed with the Comsol software. The other group will work on the Multisim side of the project as well as practicing Comsol as well. This group will be discussing the Multisim side of the project for this report. In this report we will be discussing what kind of MOSFET we chose for our circuit, as well as multiple designs for the inductor. We will also be discussing our experience in using the Comsol software.

Pending Issues

We have no pending issues from last week's report. Our client wants us to fully understand the Comsol software.

Plans for Upcoming Reporting Period

Next week we plan to actually build the circuit onto the breadboard and practice more on the Comsol software. We also plan on making a rough draft on what our PCB design should look like.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Andrew Murphy	This week, Andrew primarily focused on finding Ideal MOSFET components for the circuit.	11	71
William Nichols	This week, William primarily focused on NI Multisim and Simulink. William came up with values for each component in the Multisim circuit and experimented with each component's value. William also explored with a directional coupler in Simulink for the optical design and tried the comsol software.	12	65
Michael Lopez	This week, Michael primarily focused on Simulink. Michael came up with values for each component in the Multisim circuit and attempted to calculate the rise time based on	9	64

	the values through MATLAB. Michael also explored with a directional coupler in Simulink and did some individual optical research.		
Steven Huynh	This week, Steven primarily focused on finding Ideal MOSFET components for the circuit.	8	67
Umair Sarwar	This week, Umair primarily focused on the optical design on Simulink. Umair also tried practicing more on the Comsol software.	7	60

Gitlab Activity Summary

Nothing to report.