Design and Analysis of Plugless Charging of Electric Vehicle using Magnetic Resonance

End of semester defense

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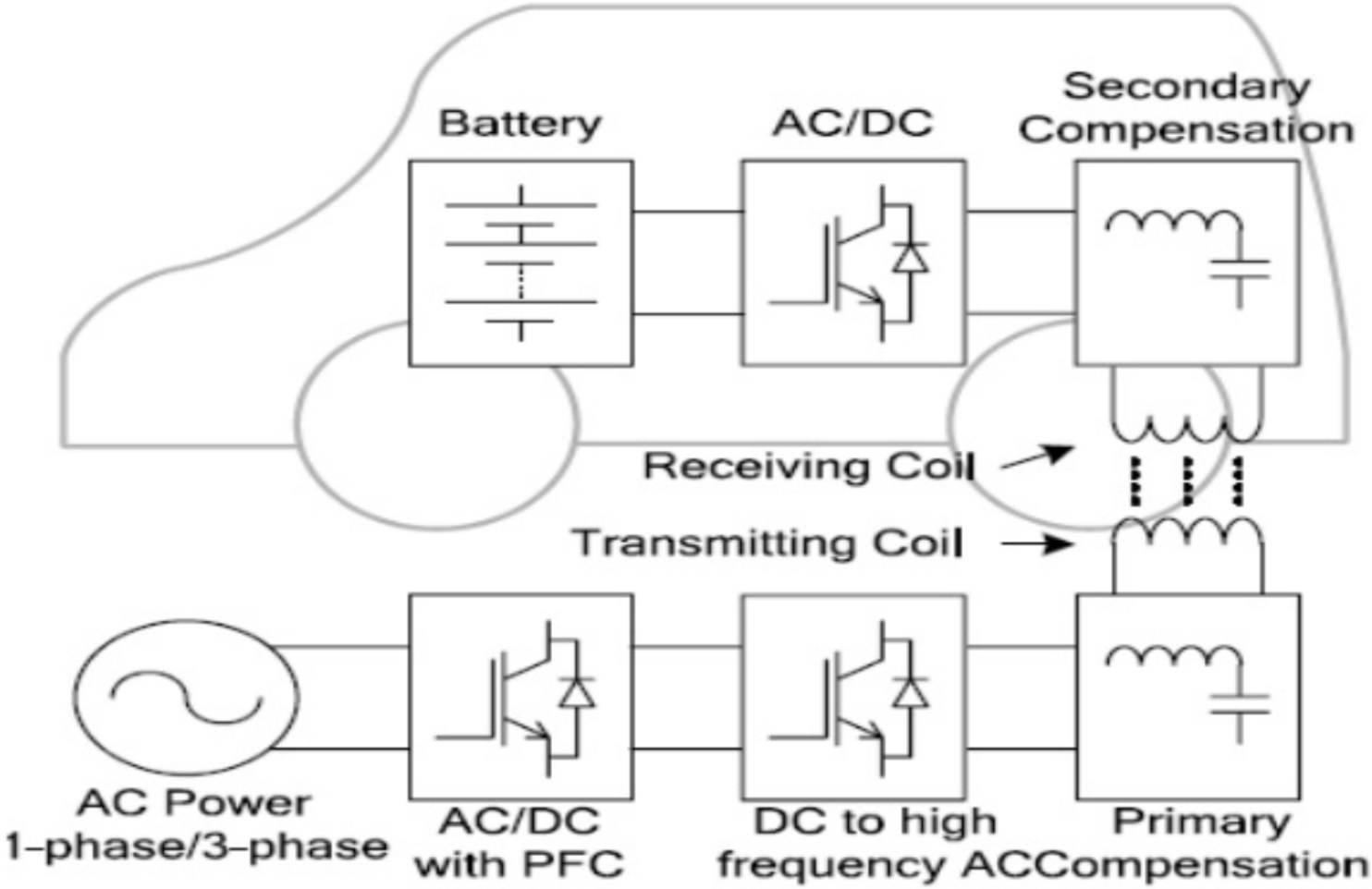
Introduction

Problem Identification

Objective

Block Diagram



Typical wireless EV charging system.

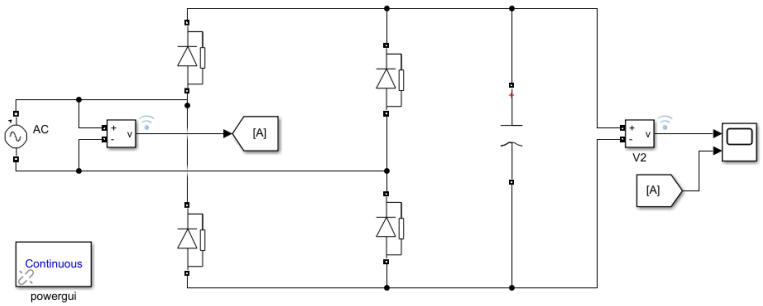
Work Completed

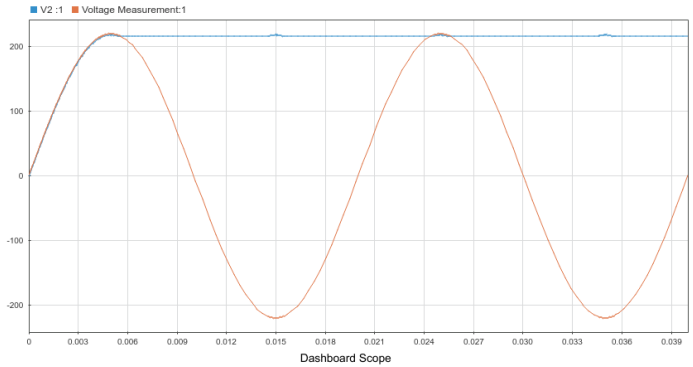
Design of each individual component was completed. Following components were designed

- Rectifier
- High frequency inverter
- Receiver-Transmitter Coil
- Buck Converter

Rectifer

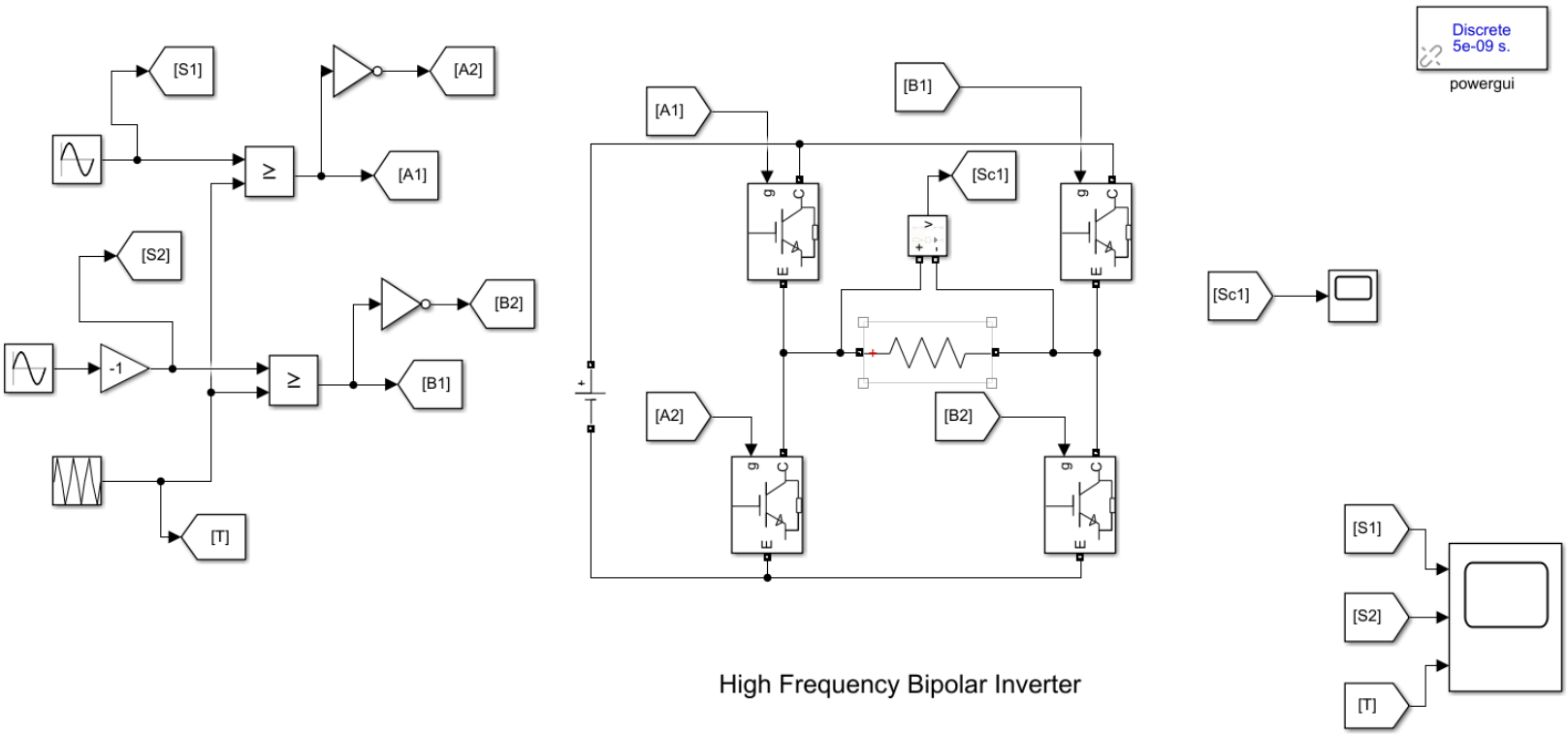
220 V Ac supply was converted into DC voltage using bridge rectifer. Capacitor was used to smoothen the pulsating DC voltage .





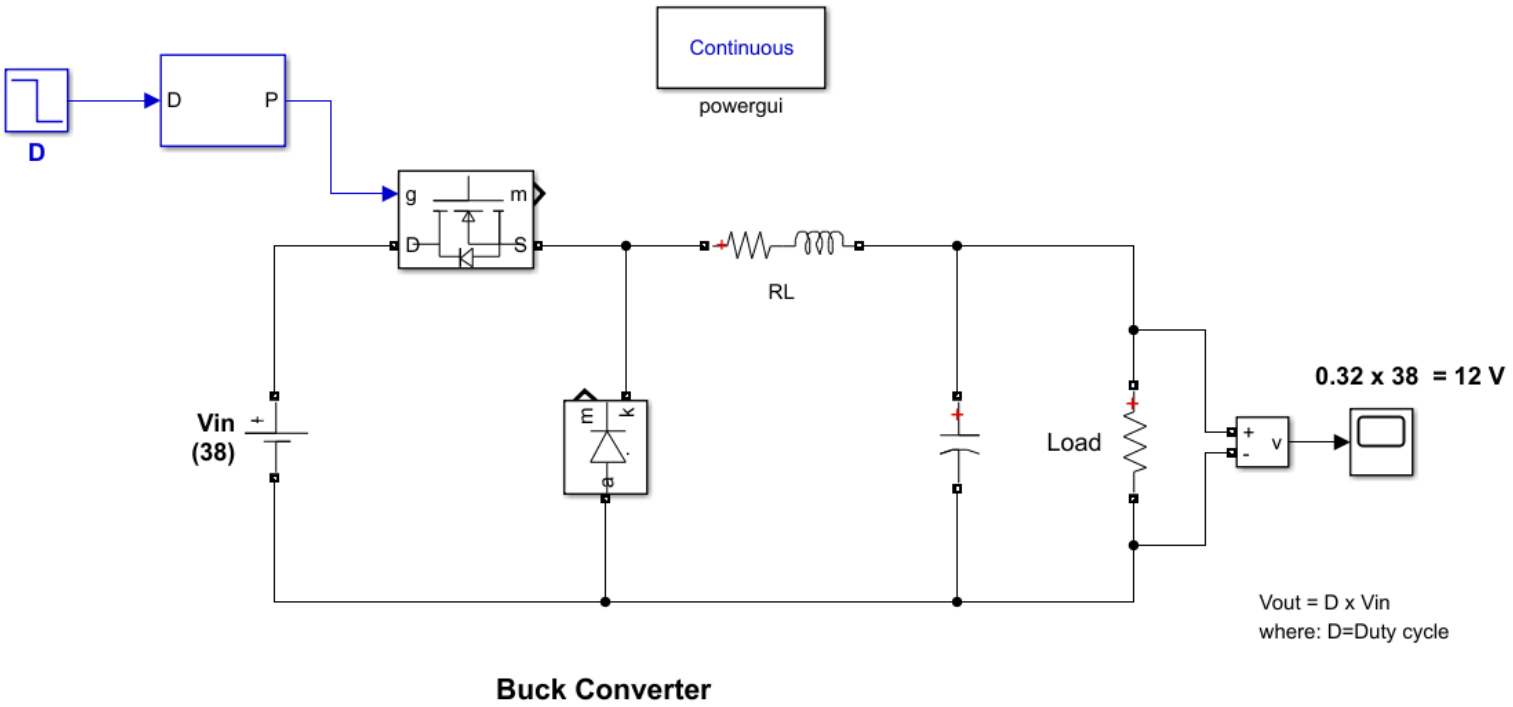
RECTIFIER

High Frequency Inverter



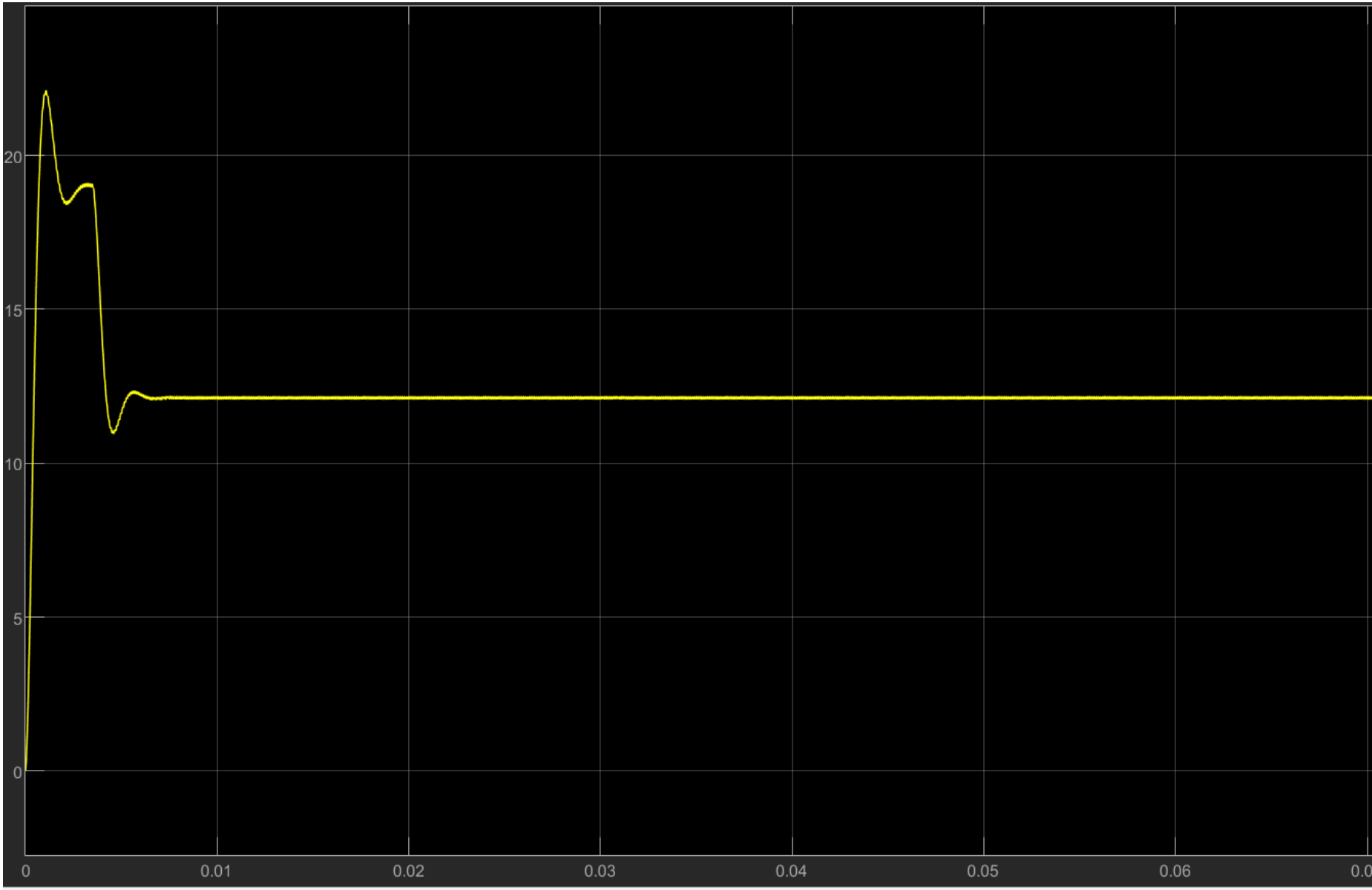
High Frequency Bipolar Inverter

buck converter



Buck Converter

buck converter



Remaining Work for Next Semester

- High frequency analysis of receiver transmitter coil using Ansys Maxwell
- Hardware realization of prototype of simulated model

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