

**DESIGN OF FULL-BRIDGE DC-DC SERIES-PARALLEL
LOADED RESONANT CONVERTER**

**This thesis is presented in partial fulfilment of requirements for the award of the
Bachelor of Electrical Engineering (Hons)**

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ACKNOWLEDGEMENT

First and foremost, all praises be to Allah S.W.T, Lord of the Universe, the Merciful and Beneficent. Salawat and Salam to the great Prophet Muhammad S.A.W, His Companion and the people who follow His path. With the blessing from Allah, the final year project about the Design of Full-Bridge DC-DC Series-Parallel Loaded Resonant Converter has been completed.

The author would like to take this opportunity to express sincere gratitude and appreciation to my beloved Project Supervisor Dr. Mohamad Fauzi Bin Omar, whose guides me to design, make a creative idea, and give a passion to be able creates an impressive new thing related to this thesis. With his opinion and valuable comments give many inputs to help me in completing this project according to designated time.

The author also would like to give appreciation to beloved family, who always contribute their support and motivation from beginning until the end of this project completed. Special thanks also to my entire friends for their helps, supports, and knowledge that they have shared throughout this project. Not forgotten to the Drive Technology Laboratory Technician, for being a big help during the hardware testing process. Last but not least, big appreciation to those their names do not appear here who have contributed to the successful completion of this thesis.

Thank you very much for the wonderful hands.

ABSTRACT

This project presents the Design of Full-Bridge DC-DC Series-Parallel Resonant Converter (FB-SPRC) to produce a low voltage supply for electronic device application. This converter is a combination between series and parallel converter and it will take many characteristic advantages from series and parallel resonant converter topology. The design and steady state analysis of series-parallel resonant converter is based on the LCC circuit whereby known as resonant tank and operates at 50kHz switching frequency. Since this converter using full bridge switching semiconductor, the device takes place as zero-voltage switching to generate a square wave form for the resonant tank operation. The simulation for this converter was developed by using MATLAB/Simulink and the selected results are recorded for analysed the concept and operation of series-parallel resonant converter topology.

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