

**HARDWARE IMPLEMENTATION OF PID MODE CONTROLLER FOR BUCK
CONVERTER BY USING DIGITAL SIGNAL PROCESSING**



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Merujuk kepada perkara di atas, bersama-sama ini disertakan 4 (EMPAT) naskah dan 1 (SATU) CD Laporan Akhir Penyelidikan bertajuk “Harware Implementation of PID Mode Controller for Buck Converter Using Digital Signal Processing”.

Sekian, terima kasih.

Yang benar,



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TABLE OF CONTENTS

TABLE OF CONTENTS	I
LIST OF FIGURES	III
LIST OF TABLES	V
LIST OF SYMBOLS ABBREVIATIONS	VI
ABSTRACT	VIII
CHAPTER 1 INTRODUCTION	1
1.1 BUCK CONVERTER.....	1
1.2 PROPORTIONAL INTEGRAL DERIVATIVE (PID)	2
1.3 DIGITAL SIGNAL PROCESSING (DSP).....	3
1.4 OBJECTIVES	4
1.5 ORGANIZATION OF THE THESIS	4
CHAPTER 2 MODELING OF BUCK CONVERTER	6
2.1 INTRODUCTION	6
2.2 THE BASIC OPERATION AND ANALYSIS OF BUCK CONVERTER	6
2.2.1 <i>Continuous Inductor Current Operation</i>	7
2.3 DERIVATION OF BASIC BUCK CONVERTER.....	9
2.4 DESIGN CONSIDERATIONS FOR BUCK CONVERTER.....	11
2.4.1	
<i>Derivation of the Inductor, Capacitor and Load resistor</i>	11
2.4.2 <i>Calculation the values of inductor, capacitor and load resistance</i>	14
2.5 SMALL SIGNAL TRANSFER FUNCTION OF BUCK CONVERTER.....	16
2.5.1 <i>Bode plot diagram</i>	19
CHAPTER 3 PID CONTROLLER DESIGN FOR BUCK CONVERTER	21
3.1 INTRODUCTION.....	21
3.2 PID CONTROLLER DESIGN FOR BUCK CONVERTER	23
3.2.1 <i>Lead compensator</i>	24
3.2.2 <i>Lag compensator</i>	26
CHAPTER 4 SIMULATION AND HARDWARE DESIGN OF BUCK CONVERTER	28

4.1 INTRODUCTION	28
4.2 SIMULATION OF BUCK CONVERTER DESIGN	29
4.2.1 Without PID controller	29
4.2.2 With PID controller	30
4.3 HARDWARE CONSTRUCTION.....	31
4.3.1 TMS320F2812 DSP controller	33
CHAPTER 5 RESULTS AND DISCUSSION	36
5.1 INTRODUCTION.....	36
5.2 SIMULATION RESULT.....	36
5.2.1 Open loop buck converter.....	37
5.2.2 Close loop buck converter	39
5.2.3 Summary of the simulation results	42
5.3 EXPERIMENT RESULT	43
CHAPTER 6 CONCLUSION 47	
6.1 CONCLUSION	47
REFERENCES	49
APPENDIX A	1
DATA SHEET FOR POWER MOSFET IRFZ3N	1
APPENDIX B	2
DATA SHEET FOR HCPL-3180 2 AMP OUTPUT CURRENT, HIGH SPEED IGBT/MOSFET GATE DRIVE OPTOCOUPLER	2
APPENDIX C	3
DATA SHEET FOR MM74HC04 HEX INVERTER.....	3

ABSTRACT

Control applications of switched mode power supplies have been widely explored. The focus of this research is to design and controlling the DC-DC Buck converter by using PID controller. The small signal models of the buck converter, obtained using standard state space averaging techniques, was utilized in the project. The PID controller was designed for generic buck converter using standard frequency response techniques. The controller was then transformed into digital controllers. This report presents the simplest method and systematic approach in design a practical Digital Signal Processing (DSP). In this project a Simulink model of the Buck converter is develop and it is controlled by PID controller. The digital controllers designed using linear and nonlinear control methods were implemented on a TI DSP. Experimental and simulation results for the buck were presented and compared.