Pulsewidth Modulated DC-to-DC Power Conversion. Circuits, Dynamics, and Control Designs

Description:
This is the definitive reference for anyone involved in pulsewidth modulated DC-to-DC power conversion. Pulsewidth Modulated DC-to-DC Power Conversion: Circuits, Dynamics, and Control Designs provides engineers, researchers, and students in the power electronics field with comprehensive and complete guidance to understanding pulsewidth modulated (PWM) DC-to-DC power converters. Presented in three parts, the book addresses the circuitry and operation of PWM DC-to-DC converters and their dynamic characteristics, along with in-depth discussions of control design of PWM DC-to-DC converters. Topics include:

- Basics of DC-to-DC power conversion
- DC-to-DC converter circuits
- Dynamic modeling
- Power stage dynamics
- Closed-loop performance
- Voltage mode control and feedback design
- Current mode control and compensation design
- Sampling effects of current mode control

Featuring fully tested problems and simulation examples as well as downloadable lecture slides and ready-to-run PSpice programs, Pulsewidth Modulated DC-to-DC Power Conversion is an ideal reference book for professional engineers as well as graduate and undergraduate students.

Contents:
Preface vii

PART I CIRCUITS FOR DC-TO-DC POWER CONVERTERS

POWER CONVERTERS

1 PWM Dc-to-dc Power Conversion 3
1.1 Description of PWM Dc-to-dc Power Conversion 4
1.2 Dc-to-dc Power Conversion System 7
1.3 Features and Issues of PWM Dc-to-dc Converter 8
1.4 Chapter Highlights 10

References 12

2 Power Stage Components 13
2.1 Semiconductor Switches 13
2.2 Energy Storage and Transfer Devices 17
2.3 Switching Circuits in Practice 38
2.4 Summary 50

References 51

Problems 51
3 Buck Converter 69
3.1 Ideal Step Down Dc-to-dc Power Conversion 70
3.2 Buck Converter: Step Down Dc-to-dc Converter 72
3.3 Buck Converter in Start Up Transient 76
3.4 Buck Converter in Steady State 78
3.4.1 Circuit Analysis Techniques 78
3.5 Buck Converter in Discontinuous Conduction Mode 87
3.6 Closed-loop Control of Buck Converter 97
3.7 Summary 107
References 108
Problems 108

4 Dc-to-dc Power Converter Circuits 123
4.1 Boost Converter 124
4.2 Buck/Boost Converter 135
4.3 Structure and Voltage Gain of Three Basic Converters 144
4.4 Flyback Converter: Transformer Isolated Buck/Boost Converter 145
4.5 Bridge-Type Buck Derived Isolated Dc-to-dc Converters 154
4.6 Forward Converters 167
4.7 Summary 180
References 181
Problems 181

PART II MODELING, DYNAMICS, AND DESIGN OF PWM DC-TO-DC CONVERTERS
5 Modeling PWM Dc-to-dc Converters 201
5.1 Overview of PWM Converter Modeling 202
5.2 Averaging Power Stage Dynamics 204
5.3 Linearizing Averaged Power Stage Dynamics 223
5.4 Frequency Response of Converter Power Stage 230
5.5 Small signal Gain of PWM Block 235
5.6 Small signal Model for PWM Dc-to-dc Converters 236
5.7 Summary 240
References 241
3.5.2 Conditions for DCM Operation 90
3.5.3 Steady State Operation in DCM 92
3.6 Closed-loop Control of Buck Converter 97
3.6.1 Closed-loop Feedback Controller 98
3.6.2 Responses of Closed-loop Controlled Buck Converter 102
3.7 Summary 107
References 108
Problems 108
4 Dc-to-dc Power Converter Circuits 123
4.1 Boost Converter 124
4.1.1 Evolution to Boost Converter 124
4.1.2 Steady State Analysis in CCM 126
4.1.3 Steady State Analysis in DCM 130
4.1.4 Effects of Parasitic Resistance on Voltage Gain 132
4.2 Buck/Boost Converter 135
4.2.1 Evolution to Buck/Boost Converter 135
4.2.2 Steady-state Analysis in CCM 138
4.2.3 Steady-state Analysis in DCM 141
4.3 Structure and Voltage Gain of Three Basic Converters 144
4.4 Flyback Converter: Transformer Isolated Buck/Boost Converter 145
4.4.1 Evolution to Flyback Converter 146
4.4.2 Steady-state Analysis in CCM 147
4.4.3 Steady-state Analysis in DCM 151
4.5 Bridge-Type Buck Derived Isolated Dc-to-dc Converters 154
4.5.1 Switch Network and Multi Winding Transformer 155
4.5.2 Full-Bridge Converter 158
4.5.3 Half-Bridge Converter 163
4.5.4 Push-Pull Converter 167
4.6 Forward Converters 167
4.6.1 Basic Operational Principles 167
4.6.2 Tertiary-Winding Reset Forward Converter 173
11.1 Sampling Effects of Current Mode Control 562
   11.1.1 Origin and Consequence of Sampling Effects 562
   11.1.2 Modeling Methodology for Sampling Effects 565
   11.1.3 Feedforward Gains 566
   11.1.4 Complete s-Domain Model for Current Mode Control 567
   11.1.5 Two Prevalent s-Domain Models for Current Mode Control 567
   11.2 Expressions for s-Domain Model for Current Mode Control 569
       11.2.1 Modified Small signal Model 570
       11.2.2 Modulator Gain F-m 571
       11.2.3 He(s): s-Domain Representation of Sampling Effects 572
       11.2.4 Feedforward Gains 582
   11.3 New Control Design Procedures for Current Mode Control 586
       11.3.1 New Power Stage Model 586
       11.3.2 Control-to-output Transfer Function with Current-Loop Closed 588
       11.3.3 Control Design Procedures 593
       11.3.4 Correlation between New and Classical Design Procedures 609
   11.4 Current Mode Control for Off-Line Flyback Converter with Optocoupler-Isolated Feedback 615
       11.4.1 Off-Line Power Supplies 615
       11.4.2 Current Mode Control for Flyback Converter with Optocoupler Feedback 616
   11.5 Summary 630

References 633

Problems 633

Index 637

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