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Autore	Kazimierczuk Marian K.
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Nota di contenuto	Pulse-Width Modulated DC--DC Power Converters; Contents; About the Author; Preface; Nomenclature; 1 Introduction; 1.1 Classification of Power Supplies; 1.2 Basic Functions of Voltage Regulators; 1.3 Power Relationships in DC-DC Converters; 1.4 DC Transfer Functions of DC-DC Converters; 1.5 Static Characteristics of DC Voltage Regulators; 1.6 Dynamic Characteristics of DC Voltage Regulators; 1.7 Linear Voltage Regulators; 1.7.1 Series Voltage Regulator; 1.7.2 Shunt Voltage Regulator; 1.8 Topologies of PWM DC-DC Converters; 1.9 Relationships Among Current, Voltage, Energy, and Power 1.10 Summary References; Review Questions; Problems; 2 Buck PWM DC-DC Converter; 2.1 Introduction; 2.2 DC Analysis of PWM Buck Converter for CCM; 2.2.1 Circuit Description; 2.2.2 Assumptions; 2.2.3 Time Interval: $0 < t < DT$ ; 2.2.4 Time Interval: $DT < t < T$ ; 2.2.5 Device Stresses for CCM; 2.2.6 DC Voltage Transfer Function for CCM; 2.2.7 Boundary Between CCM and DCM; 2.2.8 Capacitors; 2.2.9 Ripple Voltage in Buck Converter for CCM; 2.2.10 Switching Losses with Linear MOSFET Output Capacitance; 2.2.11 Switching Losses with Nonlinear

## MOSFET Output Capacitance

2.2.12 Power Losses and Efficiency of Buck Converter for CCM 2.2.13

DC Voltage Transfer Function of Lossy Converter for CCM; 2.2.14

MOSFET Gate-Drive Power; 2.2.15 Gate Driver; 2.2.16 Design of Buck

Converter for CCM; 2.3 DC Analysis of PWM Buck Converter for DCM;

2.3.1 Time Interval:  $0 < t < DT$ ; 2.3.2 Time Interval:  $DT < t < (D + D_1)T$ ;

2.3.3 Time Interval:  $(D + D_1)T < t < T$ ; 2.3.4 Device Stresses for DCM;

2.3.5 DC Voltage Transfer Function for DCM; 2.3.6 Maximum

Inductance for DCM; 2.3.7 Power Losses and Efficiency of Buck

Converter for DCM; 2.3.8 Design of Buck Converter for DCM

2.4 Buck Converter with Input Filter 2.5 Buck Converter with

Synchronous Rectifier; 2.6 Buck Converter with Positive Common Rail;

2.7 Quadratic Buck Converter; 2.8 Tapped-Inductor Buck Converters;

2.8.1 Tapped-Inductor Common-Diode Buck Converter; 2.8.2 Tapped-

Inductor Common-Transistor Buck Converter; 2.8.3 Watkins-Johnson

Converter; 2.9 Multiphase Buck Converter; 2.10 Switched-Inductor Buck

Converter; 2.11 Layout; 2.12 Summary; References; Review Questions;

Problems; 3 Boost PWM DC-DC Converter; 3.1 Introduction; 3.2 DC

Analysis of PWM Boost Converter for CCM; 3.2.1 Circuit Description

3.2.2 Assumptions 3.2.3 Time Interval:  $0 < t < DT$ ; 3.2.4 Time Interval:  $DT$

$< t < T$ ; 3.2.5 DC Voltage Transfer Function for CCM; 3.2.6 Boundary

Between CCM and DCM; 3.2.7 Ripple Voltage in Boost Converter for

CCM; 3.2.8 Power Losses and Efficiency of Boost Converter for CCM;

3.2.9 DC Voltage Transfer Function of Lossy Boost Converter for CCM;

3.2.10 Design of Boost Converter for CCM; 3.3 DC Analysis of PWM

Boost Converter for DCM; 3.3.1 Time Interval:  $0 < t < DT$ ; 3.3.2 Time

Interval:  $DT < t < (D + D_1)T$ ; 3.3.3 Time Interval:  $(D + D_1)T < t < T$ ; 3.3.4

Device Stresses for DCM

3.3.5 DC Voltage Transfer Function for DCM

## Sommario/riassunto

PWM DC-DC power converter technology underpins many energy conversion systems including renewable energy circuits, active power factor correctors, battery chargers, portable devices and LED drivers. Following the success of Pulse-Width Modulated DC-DC Power Converters this second edition has been thoroughly revised and expanded to cover the latest challenges and advances in the field. Key features of 2nd edition: Four new chapters, detailing the latest advances in power conversion, focus on: small-signal model and dynamic characteristics of the buck converter in continuous conduction

2. Record Nr.	UNINA9910818853403321
Autore	Beauchamp Tom L.
Titolo	Principles of biomedical ethics // Tom L. Beauchamp, James F. Childress
Pubbl/distr/stampa	New York, New York : , : Oxford University Press, , 2001
ISBN	0-19-979903-2
Edizione	[Fifth edition.]
Descrizione fisica	1 online resource
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Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	<p>This edition represents a thorough-going revision of what has become a classic text in biomedical ethics. Major structural changes mark the revision. The authors have added a new concluding chapter on methods that, along with its companion chapter on moral theory, emphasizes convergence across theories, coherence in moral justification, and the common morality. They have simplified the opening chapter on moral norms which introduces the framework of prima facie moral principles and ways to specify and balance them. Together with the shift of advanced material on theory to the back of the book, this heavily revised introductory chapter will make it easier for the wide range of students entering bioethics courses to use this text. Another important change is the increased emphasis on character and moral agency, drawing the distinction between agents and actions. The sections on truth telling, disclosure of bad news, privacy, conflicts of interest, and research on human subjects have also been thoroughly reworked. The four core chapters on principles (respect for autonomy, nonmaleficence, beneficence, and justice) and the chapter on professional-patient relationships retain their familiar structure, but the authors have completely updated their content to reflect developments in philosophical analysis as well as in research, medicine, and health care. Throughout, they have used a number of actual cases to illuminate and to test their theory, method, and framework of principles.</p>

