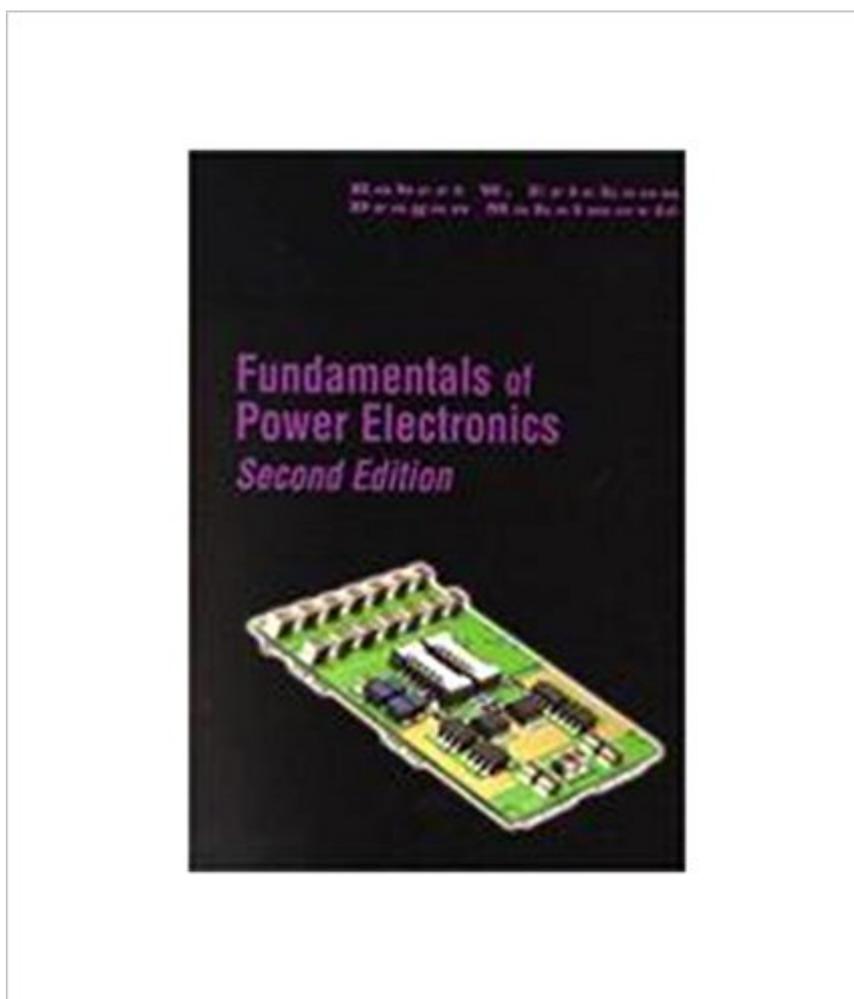


The book was found

Fundamentals Of Power Electronics 2e



Synopsis

Like New Paperback edition. Contents same.

Book Information

Paperback

Publisher: S; 2 edition (2005)

Language: English

ISBN-10: 8181283635

ISBN-13: 978-8181283634

Package Dimensions: 9.4 x 6.2 x 2.1 inches

Shipping Weight: 2.7 pounds

Average Customer Review: 4.0 out of 5 stars 50 customer reviews

Best Sellers Rank: #792,285 in Books (See Top 100 in Books) #97 in [Books > Engineering &](#)

[Transportation > Engineering > Energy Production & Extraction > Power Systems](#) #4322

[in Books > Science & Math > Nature & Ecology > Conservation](#) #9447 in [Books > Science &](#)

[Math > Physics](#)

Customer Reviews

Like New Paperback edition. Contents same.

I haven't finished the course yet, so I haven't finished the book by a long shot. So far it's fine. The first few chapters cover Buck, Boost, Buck-Boost, and Cuk converters. Steady state, ripple analysis, and continuous vs discontinuous conduction mode. I assume we'll get to transient analysis before too long too. If you have a strong sense of what Power Electronics is (what the combination of those two words together means specifically) then the material should be easy enough to grasp for you.

Chapter Titles:

- 1 Introduction
- 2 Principles of Steady State Converter Analysis
- 3 Steady-State Equivalent Circuit Modeling, Losses, and Efficiency
- 4 Switch Realization
- 5 The Discontinuous Conduction Mode
- 6 Converter Circuits
- 7 AC Equivalent Circuit Modeling
- 8 Converter Transfer Functions
- 9 Controller Design
- 10 Input Filter Design
- 11 AC and DC Equivalent Circuit Modeling of the Discontinuous Conduction Mode
- 12 Current Programmed Control
- 13 Basic Magnetics Theory
- 14 Inductor Design
- 15 Transformer Design
- 16 Power and Harmonics in Nonsinusoidal Systems
- 17 Line-Commutated Rectifiers
- 18 Pulse-Width Modulated Rectifiers
- 19 Resonant Conversion
- 20 Soft Switching

NOTE: I have only completed the first 6 of 20 chapters in this book, but I will give my review based on my experience so far. As a graduate student in Electric Power Engineering, this is one of the best books I have purchased in all of my university studies. As long as you have taken an introductory circuits course in your undergraduate curriculum, Dr. Erickson does a great job at explaining power electronics in a way that anyone can understand. I have been assigned books in many of my classes that contain poor explanations/example problems, unorganized structure, or even missing material that is vital to understanding the subject. However, this is not one of those textbooks. Although my current professor does a phenomenal job at teaching the material, I honestly feel that I could fully understand the course material by only reading this textbook. For me, as someone who prefers learning in-lecture, this is a rare instance. Do not hesitate to purchase this textbook!

This book covers a variety of topics a very well versed manner. It "refreshes" all the techniques you will need to analyze power electronics as it is needed, so no need to start with several chapters reviewing years of mathematics or electric circuits. The coverage of such material is so good that I feel that you will (re)learn the material here better than in the class that it was taught, such as the coverage of transformer models of power electronics, linearizations, bode plots, magnetics, filters, lagrange multipliers (!), resonant circuits, etc. The reason for this is because as soon as it is covered you will see how it is applied in power electronics and how these techniques provide you with a "feel" and "intuition" for the system. There is great emphasis in design and developing your skills as an engineer. This book is great as an introduction to this field.

I have several power electronics textbooks, and this is the best book I've found to use as a reference. I have also used Krein's book, which is a good introduction if you're taking his class at UIUC, but not as useful for reference. This book really takes you through all the main topics with pretty thorough coverage. At CU it's used for several courses, so it's more than just an introductory book. The first few chapters cover the basics, and then it gets into the more advanced topics (which are more practical for reference once you have learned the basics). I'm now taking those courses online and finding that Erickson follows his book pretty closely, so you get the added benefit of seeing it all twice whether you are a visual or audio learner. I was impressed that he devoted about 100 pages to magnetics design, which is really helpful. Not the same as having McLyman's book, but it will do if just need a fairly straight-forward inductor or transformer designed. Bottom line: I already have this book and am considering buying another copy to have one at home and the other at the office.

Fundamentals of Power Electronics (2nd Ed) is one of the most readable engineering texts I've ever come across. This text was required for a power electronics graduate course. The course covered about 80% of the book. Given it's 850+ pages, I expected that I'd be skimming most of it to pick out the important topics as fast as I could, but I ended up reading every page. The topics are presented in a clear concise manner, and the references are very useful. If you've been out of school for a while like I have, you may want to peruse an introductory circuit theory text first. Though, I found that I only had to reference the basics once or twice while reading this book. Keep in mind that while this text does touch on some "practical" points (specifying components, for example), it is primarily an introductory text on the theory of switching converters. My only complaint is that within the first month of owning this book, the binding ripped, and so I had to glue/tape it back together. But the content is outstanding (provided you're looking for a text book on the theory of switching converters).

Great explanations of the topic materials and great examples. This book is a perfect accompaniment to the Introduction to Power Electronics course offered on Coursera.org. Definitely recommend that course as well.

[Download to continue reading...](#)

State Estimation in Electric Power Systems: A Generalized Approach (Power Electronics and Power Systems) Solar Power: The Ultimate Guide to Solar Power Energy and Lower Bills: (Off Grid Solar Power Systems, Home Solar Power System) (Living Off Grid, Wind And Solar Power Systems) Power Training: For Combat, MMA, Boxing, Wrestling, Martial Arts, and Self-Defense: How to Develop Knockout Punching Power, Kicking Power, Grappling Power, and Ground Fighting Power Power Pivot and Power BI: The Excel User's Guide to DAX, Power Query, Power BI & Power Pivot in Excel 2010-2016 Experiments in Electronics Fundamentals and Electric Circuits Fundamentals Electric Circuit Fundamentals (7th Edition) (Floyd Electronics Fundamentals Series) Fundamentals of Power Electronics Fundamentals of Power Electronics 2e Shocking! Where Does Electricity Come From? Electricity and Electronics for Kids - Children's Electricity & Electronics Digital Electronics: A Primer : Introductory Logic Circuit Design (Icp Primers in Electronics and Computer Science) Hacking Electronics: Learning Electronics with Arduino and Raspberry Pi, Second Edition Scaling and Integration of High-Speed Electronics and Optomechanical Systems (Selected Topics in Electronics and Systems) Science Fair Projects With Electricity & Electronics: Electricity & Electronics Solar PV Off-Grid Power: How to Build Solar PV Energy Systems for Stand Alone LED

Lighting, Cameras, Electronics, Communication, and Remote Site Home Power Systems Plastic Injection Molding: Product Design & Material Selection Fundamentals (Vol II: Fundamentals of Injection Molding) (Fundamentals of injection molding series) Plastic Injection Molding: Mold Design and Construction Fundamentals (Fundamentals of Injection Molding) (2673) (Fundamentals of injection molding series) Electronics Fundamentals: Circuits, Devices & Applications (8th Edition) Electronics Technology Fundamentals: Conventional Flow Version (3rd Edition) Contemporary Electronics: Fundamentals, Devices, Circuits, and Systems Fundamentals of Network Analysis and Synthesis (Prentice-Hall electrical engineering series. Solid state physical electronics series. Prentice-Hall networks series)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)