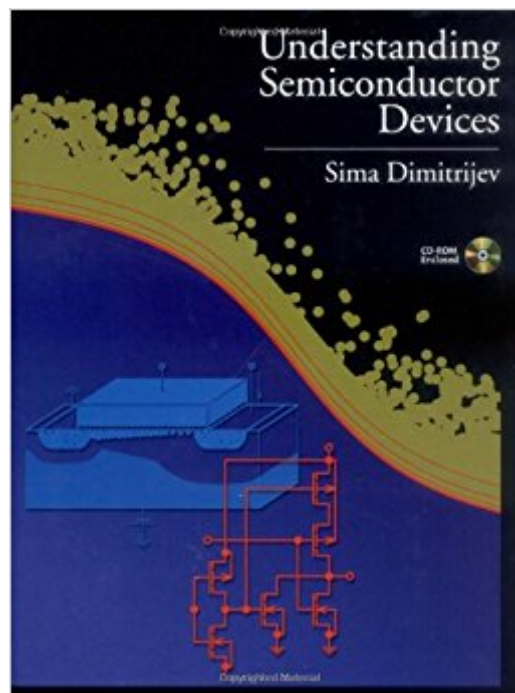




**Ebook Directory**  
the best source of ebook

The book was found

# Understanding Semiconductor Devices (The Oxford Series In Electrical And Computer Engineering)



## Synopsis

Ideal for undergraduate and beginning graduate students in electrical engineering, *Understanding Semiconductor Devices* provides a solid grounding in both fundamental principles and practical skills. The text features intuitive explanations and a motivating "electronics-to-physics" approach that progresses from basic to more abstract concepts. It includes intriguing and diverse problems, review questions, and worked out examples.

• Part I: The Fundamentals introduces students to essential material (semiconductor theory, diodes, MOSFETs, and BJTs) without assuming extensive prerequisite knowledge.

• Part II: Advanced Topics covers the specifics of deep submicron MOSFET, photonic, microwave, and power devices and introduces advanced technologies, device reliability, and quantum mechanics.

Bridging the gap between theory and practice, *Understanding Semiconductor Devices* incorporates the "nuts and bolts" of SPICE (models and parameters) and provides links between theoretical principles and real-life issues like reliability and device parameter measurement.

## Book Information

Series: The Oxford Series in Electrical and Computer Engineering

Hardcover: 592 pages

Publisher: Oxford University Press (February 24, 2000)

Language: English

ISBN-10: 019513186X

ISBN-13: 978-0195131864

Product Dimensions: 9.2 x 1.3 x 7.6 inches

Shipping Weight: 2.6 pounds

Average Customer Review: 4.5 out of 5 stars 5 customer reviews

Best Sellers Rank: #331,221 in Books (See Top 100 in Books) #12 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Solid State #41 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Circuits > Integrated #55 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Semiconductors

## Customer Reviews

Ideal for undergraduate and beginning graduate students in electrical engineering, *"Understanding Semiconductor Devices"* provides a solid grounding in both fundamental principles and practical skills. The text features intuitive explanations and a motivating "electronics-to-physics" approach

that progresses from basic to more abstract concepts. It includes intriguing and diverse problems, review questions, and worked out examples. -"Part I: The Fundamentals" introduces students to essential material (semiconductor theory, diodes, MOSFETs, and BJTs) without assuming extensive prerequisite knowledge. -"Part II: Advanced Topics" covers specifics of deep submicron MOSFET, photonic, microwave, and power devices and introduces advanced technologies, device reliability, and quantum mechanics. Bridging the gap between theory and practice, "Understanding Semiconductor Devices" incorporates the "nuts and bolts" of SPICE (models and parameters) and provides links between theoretical principles and real-life issues like reliability and device parameter measurement. CD Supplements: "Interactive MATLAB Animations" enables a quicker and deeper introduction to and comprehension of underlying theoretical concepts. Directly supports many explanations and graphs from the text. "Computer Exercises Manual: Device Parameters in SPICE" illustrates the effects and meaning of the individual device parameters described in the text. Includes 90 pages of exercises, complete solutions, and PSPICE instructions.

Sima Dimitrijevic is at Griffith University.

Excellent book!

I am extremely happy to meet a most pedagogical textbook on device physics. His explanation is very comprehensive and illustrative. Drawing is a fantastic and explanation is intuitive and based on basic physics and mathematics thus it's very easy and comfortable to follow the book. This book is really recommended for undergraduate.

This book is excellent. Every concept is clearly explained, pictures support every argument (I want to emphasise this: amazing). I have read many books about semiconductors, and again this one clarified just everything...The understanding that you get about Semiconductors through this book is just amazing. Very helpful for beginners and even better when you need to review some concepts that were poorly explained or badly learned in the past. Just excellent. Juan

I have been using this book for my Electric Devices course. It is a really, really good book. I would very much recommend it to any professors to use it as their textbook for their class. It explains concepts very clearly, and easy to understand. A+ to the author!

As a graduate student going through the book by myself I found the content really useful as well as very understandable. I would highly recommend this book to anyone wishing to learn more about the basic as well as the more complex principles of semiconductor devices.

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

Understanding Semiconductor Devices (The Oxford Series in Electrical and Computer Engineering)  
Principles of Semiconductor Devices (The Oxford Series in Electrical and Computer Engineering)  
Fundamentals of Electrical Engineering (The Oxford Series in Electrical and Computer Engineering)  
Fabrication Engineering at the Micro- and Nanoscale (The Oxford Series in Electrical and Computer Engineering)  
The Science and Engineering of Microelectronic Fabrication (The Oxford Series in Electrical and Computer Engineering)  
Semiconductor Physics and Applications (Series on Semiconductor Science and Technology)  
Electrical Engineering Reference Manual for the Electrical and Computer PE Exam, Sixth Edition  
Semiconductor Laser Engineering, Reliability and Diagnostics: A Practical Approach to High Power and Single Mode Devices  
Modern Digital and Analog Communication Systems (The Oxford Series in Electrical and Computer Engineering)  
Electric Machinery and Transformers (The Oxford Series in Electrical and Computer Engineering)  
Operation and Modeling of the MOS Transistor (The Oxford Series in Electrical and Computer Engineering)  
Operation and Modeling of the MOS Transistor: Special MOOC Edition (The Oxford Series in Electrical and Computer Engineering)  
Circuits and Systems: A Modern Approach (The Oxford Series in Electrical and Computer Engineering)  
Linear System Theory and Design (The Oxford Series in Electrical and Computer Engineering)  
An Introduction to Mixed-Signal IC Test and Measurement (The Oxford Series in Electrical and Computer Engineering)  
Probabilistic Methods of Signal and System Analysis (The Oxford Series in Electrical and Computer Engineering)  
Analog Methods for Computer-Aided Circuit Analysis and Diagnosis (Electrical and Computer Engineering)  
Microelectronic Circuits (The Oxford Series in Electrical and Computer Engineering) 7th edition  
CMOS Analog Circuit Design (The Oxford Series in Electrical and Computer Engineering)  
Digital Integrated Circuit Design (The Oxford Series in Electrical and Computer Engineering)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)