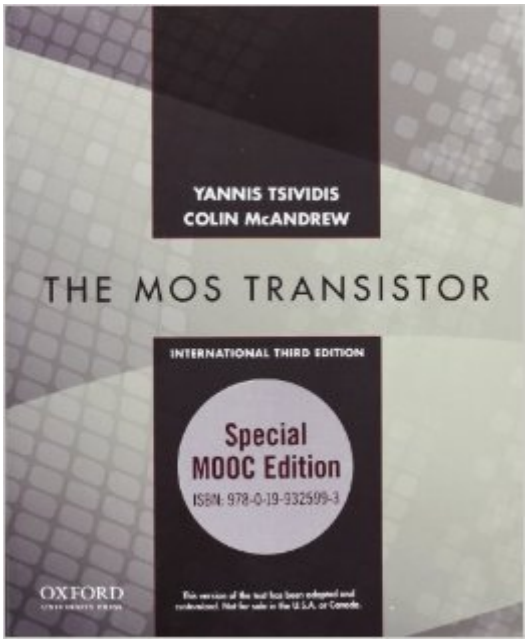
Operation And Modeling Of The MOS Transistor: Special MOOC Edition (The Oxford Series In Electrical And Computer Engineering)



Synopsis

Operation and Modeling of the MOS Transistor has become a standard in academia and industry. Extensively revised and updated, the third edition of this highly acclaimed text provides a thorough treatment of the MOS transistor--the key element of modern microelectronic chips.

Book Information

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Customer Reviews

This review is for the third-edition (ISBN 978-0-19-517015-3) of this book. All other reviews by others prior to this review are for the second-edition (ISBN 0-19-517014-8). However, all other reviews are still applicable to the third-edition.As other reviewers already pointed out, this is a great electrical/electronics engineering textbook. The third-edition has been extensively revised and 700-page long while the second-edition is 600-page long. I have absolutely no doubt in my mind that people who enjoyed the second-edition will also enjoy the third-edition even more and will feel that the contents of the book are up-to-date.The mathematical requirements to understand this book are introductory differential and integral calculus. And one must be willing to sit down with a pencil and paper to derive many equations in the book. Furthermore, one must have ready access to computer with mathematical software such as MATLAB with Optimization Toolbox installed. I found myself using MATLAB commands such as "fsolve" a lot to plot the graphs that I see on the book.This book covers only Si (silicon) bulk MOS transistors and does not cover the following MOS

topics.SOI transistorsGaAs/InP transistorsRF modelingIn my opinion, the authors intended to write a textbook, not an encyclopedia. And it becomes very clear why some topics are left out of the book as one reads through the book. The books/papers covering missing topics are listed in Bibliography section at the end of each chapter. The authors never use a term such as "It is easy to see..." and skip explanations of certain topics in the book. If a topic needs to be explained, the authors went great lengths to explain the topic.