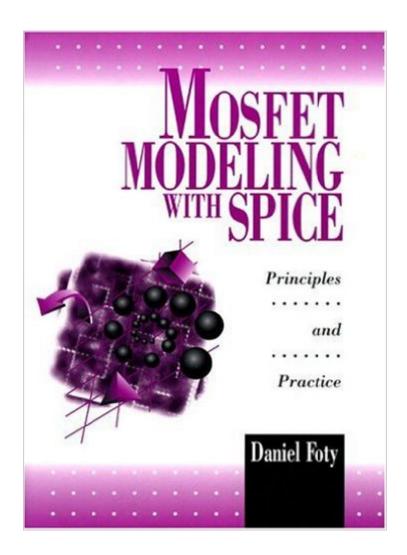
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MOSFET Modeling With SPICE: Principles And Practice





Synopsis

This book will help CMOS circuit designers make the best possible use of SPICE models, and will prepare them for new models that may soon be introduced. Introduces SPICE modeling and its use in CMOS circuit design. Presents the formalism of model building and the semiconductor physics of MOS structures. Covers each important SPICE model, showing how to choose the appropriate model. Discusses the popular HSPICE Level 28, as well as Levels 1-3, BSIM 1-3, and MOS Model 9. Presents techniques for accounting for systematic process variations. Describes new model candidates, including the Power-Lane Model, the PCIM Model, and the EKV Model. Includes extensive examples throughout. Practicing engineers and scientists in the semiconductor industry; engineering faculty and students.

Book Information

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Customer Reviews

This book explains well about several MOSFET models for SPICE simulations with informative historical review. MOSFET model parameters is now essential for semiconductor chip design as a communication tool between process/device engineers and circuit designers. In this book, starting from compact description of MOSFET physics, several well-known models are described seperately. So beginners can read only what they need. In addition, reading throughout introduction and final comments of each chapters give us information on progress of MOSFET models. If possible, I want to have an additional chapter which compares several models from the viewpoints

of physical modeling and robustness of circuit simulation. Anyway, I recommend this book both to process and design engineers as well as modeling engineers for effective development of future semiconductor chips.

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