Synopsis

During the last decade many new concepts have been proposed for improving the performance of power MOSFETs. The results of this research are dispersed in the technical literature among journal articles and abstracts of conferences. Consequently, the information is not readily available to researchers and practicing engineers in the power device community. There is no cohesive treatment of the ideas to provide an assessment of the relative merits of the ideas. "Advanced Power MOSFET Concepts" provides an in-depth treatment of the physics of operation of advanced power MOSFETs. Analytical models for explaining the operation of all the advanced power MOSFETs will be developed. The results of numerical simulations will be provided to give additional insight into the device physics and validate the analytical models. The results of two-dimensional simulations will be provided to corroborate the analytical models and give greater insight into the device operation.

Book Information

Hardcover: 562 pages
Publisher: Springer; 2010 edition (July 7, 2010)
Language: English
ISBN-10: 1441959165
Product Dimensions: 6.1 x 1.2 x 9.2 inches
Shipping Weight: 2.1 pounds (View shipping rates and policies)
Average Customer Review: 5.0 out of 5 stars See all reviews (2 customer reviews)
Best Sellers Rank: #1,068,878 in Books (See Top 100 in Books) #45 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Transistors #296 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Microelectronics #358 in Books > Science & Math > Physics > Solid-State Physics

Customer Reviews

This book provides an excellent introduction to charge coupled devices that isn't covered in the more basic "Fundamentals of Power Semiconductor Devices" by the same author. If you want to have a good understanding of the theoretical background behind superjunction and GD MOSFETs, this is your go-to book. "Fundamentals of Power Semiconductor Devices" provides all of the basic power MOSFET models (Ron and Switching, along with deriving device capacitances), and should be sufficient if you're not looking for the advanced concepts (SJ, CC, GD) that have been developed
to push the unipolar limit.

satisfied, A+

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