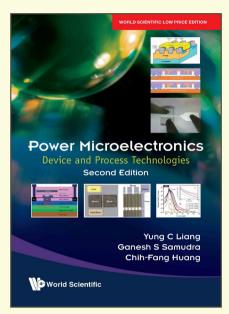




# **Power Microelectronics, 2nd Edition**

## **Device and Process Technologies**



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### **ABOUT THE BOOK**

"This is an excellent reference book for graduates or undergraduates studying semiconductor technology, or for working professionals who need a reference for detailed theory and working knowledge of processes in the field of power semiconductor devices."

— IEEE Electrical Insulation Magazine

This descriptive textbook provides a clear look at the theories and process technologies necessary for understanding the modern power semiconductor devices, i.e. from the fundamentals of *p-n* junction electrostatics, unipolar MOSFET and superjunction structures, bipolar IGBT, to the most recent wide bandgap SiC and GaN devices. It also covers their associated semiconductor process technologies. Real examples based on actual fabricated devices, with the process steps described in clear detail are especially useful. This book is suitable for university courses on power semiconductor or power electronic devices. Device designers and researchers will also find this book a good reference in their work, especially for those focusing on the advanced device development and design aspects.

#### READERSHIP

Researchers, academics, professionals, final-year undergraduate and graduate students in circuits & systems and electrical & electronic engineering.

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- Introduction
- Carrier Physics and Junction Electrostatics
- Bipolar Junction Diode
- Power Metal-Oxide-Semiconductor Field-Effect Transistor
- Insulated-Gate Bipolar Transistor
- Superjunction Structures
- Silicon Carbide Power Devices
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