

The IGBT Device: Physics, Design and Applications of the Insulated Gate Bipolar Transistor



The IGBT device has proved to be a highly important Power Semiconductor, providing the basis for adjustable speed motor drives (used in air conditioning and refrigeration and railway locomotives), electronic ignition systems for gasolinepowered motor vehicles and energy-saving compact fluorescent light bulbs. Recent applications include plasma displays (flat-screen TVs) and electric power transmission systems, alternative energy systems and energy storage. This book is the first available to cover the applications of the IGBT, and provide the essential information needed by applications engineers to design new products using the device, in sectors including consumer, industrial, lighting, transportation, medical and renewable energy. The author, B. Jayant Baliga, invented the IGBT in 1980 while working for GE. His book will unlock IGBT for a new generation of engineering applications, making it essential reading for a wide audience of electrical engineers and design engineers, as well as an important publication for semiconductor specialists. Essential design information for applications engineers utilizing IGBTs in the consumer, industrial, lighting, transportation, medical and renewable energy sectors. Readers will learn the methodology for the design of IGBT chips including edge terminations, cell topologies, gate layouts, and integrated current sensors. The first book to cover applications of the IGBT, a device manufactured around the world by more than a dozen companies with sales exceeding \$5 Billion; written by the inventor of the device.

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Jayant Baliga: Designing The Insulated-Gate Bipolar Transistor (MOS) technology and bipolar physics research that directly named Yamagami, who in a 1968 Japanese patent application proposed a MOS controlling a Hans W. Becke and Carl F. Wheatley were designing a similar device. **The IGBT Device: Physics, Design and Applications of the Insulated** Buy The IGBT Device: Physics, Design and Applications of the Insulated Gate Bipolar Transistor 1st edition by Baliga, B. Jayant (2015) Hardcover on **Dr. Jayant Baliga - Primary Faculty - Department of Electrical and** The IGBT Device: Physics, Design and Applications of the Insulated Gate Bipolar Transistor. The IGBT Device: Physics, Design and Applications of the Insulated **The IGBT Device: Physics, Design and Applications of the Insulated** Physics, Design and Applications of the Insulated Gate Bipolar Transistor B. [1] B.J. 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