

Continue





Power electronics muhammad h rashid 3rd edition pdf

Power electronics muhammad h. rashid. Power electronics muhammad h rashid 3rd edition pdf. Power electronics muhammad rashid pdf. Power electronics handbook muhammad h. rashid. Power electronics rashid. Power electronics muhammad rashid.

Muhammad H. Rashid earned his undergraduate degree in electrical engineering from Bangladesh University of Engineering and Technology and his master's and doctoral degrees from the University of Birmingham, UK. Currently, he is a Professor of Electrical Engineering at the University of Florida and serves as the Director of the OF/UWF Joint Program in Electrical and Computer Engineering. Previously, he held various academic positions, including Professor of Electrical Engineering at Indiana University-Purdue University Fort Wayne, Associate Professor at Concordia University, and Professor at Purdue University Calumet. He has also worked as a design engineer at Brush Electrical Machines Ltd., Research Engineer at Lucas Group Research Centre, and Lecturer at the Higher Institute of Electronics in Malta. Rashid is actively involved in teaching, research, and lecturing on power electronics. He has authored 14 books and over 100 technical papers, with his publications widely adopted as textbooks globally. His book "Power Electronics" has been translated into multiple languages, including Spanish, Portuguese, Indonesian, Korean, and Persian, while "Microelectronics" has been translated into Spanish in Mexico and Spain. Dr. Rashid is a renowned expert in power electronics, with a distinguished career marked by numerous achievements. He has edited several publications, including the Power Electronics Handbook, published by Academic Press in 2001. Dr. Rashid holds multiple professional certifications, including being a registered Professional Engineer in Ontario, Canada, and a Fellow of the Institution of Electrical Engineers (IEE) and Institute of Electrical and Electronics Engineers (IEEE). His contributions to power electronics education earned him an IEEE Fellowship. Dr. Rashid has received several awards for his work, including the 1991 Outstanding Engineer Award from IEEE and the 2002 IEEE Educational Activity Award Meritorious Achievement Award in Continuing Education. He is also a seasoned engineering evaluator, having served as an ABET program evaluator for electrical engineering from 1995 to 2000 and currently evaluating programs for the Southern Association of Colleges and Schools (SACS). Dr. Rashid's latest publication, Power Electronics, serves as a comprehensive textbook for undergraduate students in electrical and electronic engineering. The book covers fundamental principles, device characteristics, conversion techniques, and applications, featuring a bottom-up approach that emphasizes the importance of understanding power conversions. The third edition of Power Electronics is a significant revision of the previous edition, introducing advanced modulation techniques, new chapters on multilevel inverters, flexible AC transmission systems, and gate drive circuits. The book also integrates state-of-the-art techniques and covers topics beyond the scope of a typical one-semester course. This book provides verified simulations using SPICE software, along with standard software and design examples. It examines power converters with RL-loads under both continuous and discontinuous current conduction. The text also includes expanded sections to explain complex topics. The book is divided into five parts: introduction, devices and gate-drive circuits, power conversion techniques, applications, and protection and thermal modeling. Appendices review topics such as three-phase circuits, magnetic circuits, switching functions of converters, DC transient analysis, and Fourier analysis. Power electronics deals with the control and conversion of electric power using solid-state electronics. This requires the switching on and off of power semiconductor devices. The text discusses how low-level electronics circuits generate gating signals for these devices and how microprocessors are replacing integrated circuits and discrete components. The ideal power device should have no limitations in terms of turn-on time, turn-off time, current, and voltage handling capabilities. Power semiconductor technology is rapidly developing faster switching devices with increasing voltage and current limits. The book covers the applications of modern microprocessors and digital signal processing in synthesizing control strategies for gating power devices to meet conversion specifications. It also explores the potential applications of power electronics, which are yet to be fully explored. The author, Muhammad H. Rashid, is a professor at the University of West Florida with extensive experience in electrical engineering. As a renowned expert in electronics, power electronics, and professional ethics, Dr. Rashid has had a distinguished career spanning across various countries. His extensive experience includes working as a research engineer at Brush Electrical Machines Ltd. (England, UK), lecturing and heading the Control Engineering Department at the Higher Institute of Electronics in Libya and Malta. He has also published numerous books and papers, with many of his works adopted as textbooks globally. Dr. Rashid's contributions to power electronics education have earned him prestigious awards from the Institute of Electrical and Electronics Engineers (IEEE), including the 1991 Outstanding Engineer Award and the 2002 IEEE Educational Activity Award. Additionally, he has received recognition for his dedication to undergraduate electrical engineering education, receiving the 2008 IEEE Undergraduate Teaching Award. As a testament to his expertise, Dr. Rashid is a Fellow of the Institution of Engineering and Technology (IET) and Life Fellow of the Institute of Electrical and Electronics Engineers (IEEE).