

Reliability of power electronic converter systems

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Résumé ou extrait : The main aims of power electronic converter systems (PECS) are to control, convert, and condition electrical power flow from one form to another through the use of solid-state electronics. This book outlines current research into the scientific modeling, experimentation, and remedial measures for advancing the reliability, availability, system robustness, and maintainability of PECS at different levels of complexity. Drawing on the experience of an international team of experts, this book explores the reliability of PECS covering topics including an introduction to reliability engineering in power electronic converter systems; anomaly detection and remaining-life prediction for power electronics; reliability of DC-link capacitors in power electronic converters; reliability of power electronics packaging; modeling for life-time prediction of power semiconductor modules; minimization of DC-link

capacitance in power electronic converter systems; wind turbine systems; smart control strategies for improved reliability of power electronics system; lifetime modelling; power module lifetime test and state monitoring; tools for performance and reliability analysis of power electronics systems; fault-tolerant adjustable speed drive systems; mission profile-oriented reliability design in wind turbine and photovoltaic systems; reliability of power conversion systems in photovoltaic applications; power supplies for computers; and high-power converters. Reliability of Power Electronic Converter Systems is essential reading for researchers, professionals and students working with power electronics and their applications, particularly those specialising in the development and application of power electronic converters and systems."

Sujet - Nom commun : Fiabilité

Convertisseurs électriques

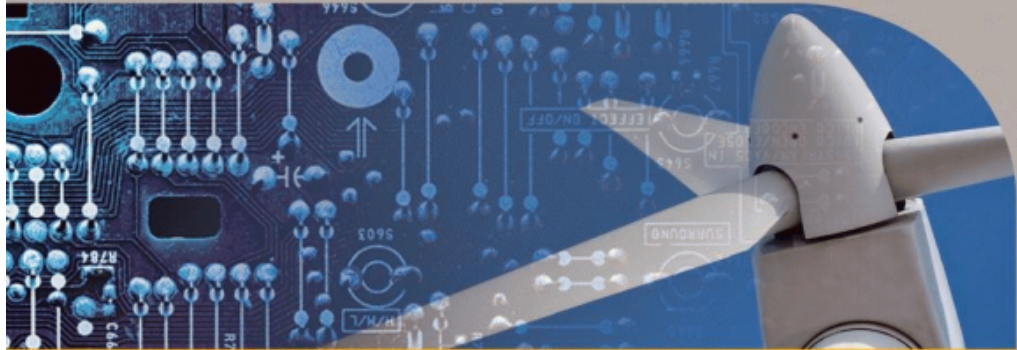
Reliability (Engineering)

Electric current converters

Image de présentation :



Power and Energy Series 80



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