1. Record Nr. UNINA9910824318103321 Autore Zhang Bo <1976-> **Titolo** Sneak circuits of power electronic converters / / Bo Zhang, Dongyuan Qiu Pubbl/distr/stampa Hoboken:,: John Wiley & Sons Inc.,, 2015 **ISBN** 1-118-37995-0 1-118-37996-9 Edizione [First edition.] Descrizione fisica 1 online resource (304 p.) Disciplina 621.31/3 Soggetti Electric current converters Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Cover: Title Page: Copyright: Contents: About the Authors: Preface: Nota di contenuto Acknowledgments; Chapter 1 Sneak Circuit and Power Electronic Systems; 1.1 Reliability of Power Electronic Systems; 1.2 Sneak Circuit; 1.2.1 Definition of Sneak Circuit: 1.2.2 Examples of Sneak Circuits: 1.2.3 Basic Causes of Sneak Circuit; 1.3 Sneak Circuit Analysis; 1.3.1 Definition of Sneak Circuit Analysis; 1.3.2 History of Sneak Circuit Analysis; 1.3.3 Methods of Sneak Circuit Analysis; 1.3.4 Benefits of Sneak Circuit Analysis; 1.3.5 Relationship between Sneak Circuit Analysis and other Safety Techniques 1.4 Power Electronic System and Sneak Circuit Analysis 1.5 Arrangement of this Book; References; Part I Sneak Circuit Phenomena; Chapter 2 Sneak Circuits of Resonant Switched Capacitor Converters; 2.1 Introduction; 2.2 Sneak Circuits of Basic RSC Converter; 2.2.1 Sneak Circuits of Basic Step-Down RSC Converter; 2.2.2 Sneak Circuits of Basic Step-Up RSC Converter; 2.2.3 Sneak Circuits of Basic Inverting RSC Converter; 2.2.4 Sneak Circuit Performance of Basic RSC Converters: 2.3 Sneak Circuits of High-Order RSC Converter: 2.3.1

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4.3.1 Normal Operating Mode of Buck ZVS MR Converter

Sommario/riassunto

The first treatment of advanced knowledge of electrical sneak circuits and its analysis method in power electronics. The work on sneak circuit and its analysis methods for power converters contributes to the reliability of power electronic systems worldwide. Most books in the subject concentrate on electronic systems, but this book is perhaps the first to examine power electronic systems. It describes the sneak circuit phenomena in power converters, introduces some SCA methods for power electronic systems and proposes how to eliminate and make use of sneak circuits. The book is divided