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Soggetti	Electronic circuits - Mathematical models Solid state electronics Microwave integrated circuits Radio frequency integrated circuits Phase shifters Limiter circuits Electronic control
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Control Components Using Si, GaAs, and GaN Technologies; Contents; Preface; Chapter 1 Introduction; 1.1 History of Control Components; 1.2 Types of Control Components; 1.3 Solid-State Switching Devices; 1.4 Design of Control Components; 1.5 Fabrication of Control Components; 1.6 Applications; 1.7 Book Organization; References; Chapter 2 Control Devices; 2.1 PIN Diodes; 2.1.1 Operation of PIN Diodes; 2.1.2 PIN Diode Models; 2.2 GaAs MESFETs; 2.2.1 Operation of MESFETs; 2.2.2 Linear Switch FET Models; 2.2.3 Nonlinear Switch FET Models; 2.3 GaAs HEMTs; 2.4 GaAs HBTs; 2.5 GaN HEMTs. 2.6 CMOS Transistors 2.6.1 Operation of CMOS Switch; 2.6.2 Various Body Floating Techniques; 2.6.3 CMOS Transistor Models; 2.7 Other Devices; 2.7.1 Schottky Diodes; 2.7.2 Varactor Diodes; 2.8 Transistor Model Scaling; 2.9 Biasing of Switching Devices; 2.9.1 Biasing of PIN Diodes; 2.9.2 Biasing of Transistors; 2.10 Switching Speed; 2.10.
Sommario/riassunto	Control circuits are important parts of RF and microwave systems. Their

compact size, high performance, and low cost have played a vital role in the development of cost effective solutions and new applications during the past quarter century. This book provides a comprehensive treatment of such circuits, including device operation and their models, basic circuit theory and designs, and applications. The unique features of this book include in-depth and comprehensive study of control circuits, extensive design equations and figures, treatment of practical aspect of circuits and description of fabrication technologies. It provides you with a broad view of solid state control circuits including various technologies and their comparison and up to date information.
