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Altri autori (Persone)	McIntireRobert DonnellPierre
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Nota di contenuto	<p>""INTEGRATED CIRCUITS,PHOTODIODES AND ORGANIC FIELDEFFECT TRANSISTORS""; ""CONTENTS""; ""PREFACE""; ""RESEARCH AND REVIEW STUDIES""; ""METAMATERIALS TECHNOLOGY: APPLICATIONTO RADIOFREQUENCY AND MICROWAVE CIRCUITS""; ""ABSTRACT""; ""1. INTRODUCTION TO METAMATERIALS""; ""2. METAMATERIALS IN PLANAR TECHNOLOGY:METAMATERIAL TRANSMISSION LINES""; ""2.1. The Dual Transmission Line Concept""; ""2.2. CL-Loaded Lines: The Composite Right/Left Handed TransmissionLine Concept""; ""2.3. Resonant Type Metamaterial Transmission Lines""; ""3. APPLICATIONS OF METAMATERIAL TRANSMISSION LINES""</p> <p>""3.1. Metamaterial Filters""""3.1.1. Stop Band Filters: Application to Spurious Suppression in ConventionalFilters""; ""3.1.2. Narrow Band Pass Filters and Diplexers""; ""3.1.3. Wide and Ultra Wide Band (UWB) Pass Filters""; ""3.1.4. Metamaterial Based Filters Subjected to Standard Responses:A Design Methodology""; ""3.2. Enhanced Bandwidth Components""; ""3.3. Multiband Components""; ""4. CONCLUSION""; ""REFERENCES""; ""RELIABILITY ASSESSMENT OF INTEGRATEDCIRCUITS AND ITS MISCONCEPTION""; ""ABSTRACT""; ""I. THE IMPORTANCE OF INTEGRATED CIRCUIT RELIABILITY""</p> <p>""II. COMMON RELIABILITY PRACTICES IN INTEGRATEDCIRCUIT INDUSTRY""""1. Process Reliability Test in Wafer Fabrication Manufacturers""; ""2. Product Reliability Tests in IC Assembly and</p>

Packaging Manufacturers"; "3. Highly Accelerated Stress Test (HAST)";
"III. MISCONCEPTIONS IN COMMON RELIABILITY ASSESSMENT OF
INTEGRATED CIRCUITS"; "1. Zero Failure Represents Good Reliability";
"2. Higher MTTF Represents Better Reliability"; "3. MTTF Is the Mean
Failure Time"; "4. Exponential Distribution Is Sufficient to Analyze the
Test Data"
"5. The Higher the Stress, the More Effective Is the Reliability Test"
"A. Masked Failure Mechanism"; "B. Variation of Failure Mechanism"; "6.
All Test Data Are Valid"; "7. Only One Failure Mechanism Exist in the
Failed Units"; "8. Probability Plot Is Sufficient for Test Data Analysis";
"9. Small Sample Size Is Sufficient"; "10. The Important of Confidence
Interval"; "IV. CONCLUSION"; "REFERENCES"; "DESIGN OF A
MULTICHANNEL INTEGRATED BIOSENSOR CHIP AND MICROELECTRONIC
SYSTEM FOR EXTRACELLULAR NEURAL RECORDING"; "ABSTRACT"; "1.
INTRODUCTION"; "2. SYSTEM OVERVIEW"
"3. SYSTEM ARCHITECTURE AND DESIGN"
"3.1. Neural Signal Input";
"3.2. Preamplifier Buffers"; "3.3. Analysis and Design of the Two-
Stage Amplifier Based Preamplifier Buffer"; "3.3.1. Device Model";
"3.3.2. Frequency Response and Pole/Zero Locations"; "3.3.3. Output
Swing"; "3.3.4. Common-Mode Input Range"; "3.3.5. Internal Slew
Rate"; "3.3.6. External Slew Rate"; "3.3.7. Systematic Input-Referred
Offset Voltage Minimization"; "3.3.8. Input-Referred Thermal Noise";
"3.3.9. Preamplifier Buffer Design"; "3.4. Channels Addressing and
Sequencing"
"3.5. Biasing Circuitry"

Sommario/riassunto

Introduces metamaterials technology, a novel approach for the design of radiofrequency and microwave components and circuits. This book discusses the intrinsic charge transport in organic field-effect transistors based on self-assembled monolayers and on the nature of transport in organic systems.
