1. Record Nr. UNINA9910140452403321

Autore	Gao Jianjun <1968->
Titolo	Heterojunction bipolar transistors for circuit design : microwave modelling and parameter extraction / / Jianjun Gao
Pubbl/distr/stampa	Singapore : , : John Wiley and Sons, Incorporated, , 2015
ISBN	1-118-92153-4 1-118-92155-0
Descrizione fisica	1 online resource (278 p.)
Disciplina	621.3815/28
Soggetti	Bipolar transistors Heterojunctions Electronic circuit design Microwave measurements
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Title Page; Copyright Page; Contents; About the Author; Preface; Acknowledgments; Nomenclature; Chapter 1 Introduction; 1.1 Overview of Heterojunction Bipolar Transistors; 1.2 Modeling and Measurement for HBT; 1.3 Organization of This Book; References; Chapter 2 Basic Concept of Microwave Device Modeling; 2.1 Signal Parameters; 2.1.1 Low-Frequency Parameters; 2.1.2 S-Parameters; 2.2 Representation of Noisy Two-Port Network; 2.2.1 Noise Matrix; 2.2.2 Noise Parameters; 2.3 Basic Circuit Elements; 2.3.1 Resistance; 2.3.2 Capacitance; 2.3.3 Inductance; 2.3.4 Controlled Sources 2.3.5 Ideal Transmission Line2.4 - and T-Type Networks; 2.4.1 T-Type Network; 2.4.2 -Type Network; 2.4.3 Relationship between - and T-Type Networks; 2.5 Deembedding Method; 2.5.1 Parallel Deembedding; 2.5.2 Series Deembedding; 2.5.3 Cascading Deembedding; 2.6 Basic Methods of Parameter Extraction; 2.6.1 Determination of Capacitance; 2.6.2 Determination of Inductance; 2.6.3 Determination of Resistance; 2.7 Summary; References; Chapter 3 Modeling and Parameter Extraction Methods of Bipolar Junction Transistor; 3.1 PN Junction; 3.2 PN Junction Diode; 3.2.1 Basic Concept 3.2.2 Equivalent Circuit Model3.2.3 Determination of Model Parameters;