Record Nr.	UNINA9910462946803321
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Titolo	RF/microwave circuit design for wireless applications [[electronic resource] /] / Ulrich L. Rohde, Matthias Rudolph
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, 2013
ISBN	1-118-43148-0 1-283-85885-1 1-118-43140-5
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (915 p.)
Altri autori (Persone)	RudolphMatthias <1969->
Disciplina	621.381/32 621.38132
Soggetti	Microwave circuits - Design and construction Microwave integrated circuits - Computer-aided design Radio frequency integrated circuits - Design and construction Semiconductors - Computer-aided design Wireless communication systems - Equipment and supplies - Design and construction Electronic books.
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	RF/Microwave Circuit Design for WirelessI Applications; Contents; Foreword; Preface; 1 Introduction to Wireless Circuit Design; 1.1 Introduction; 1.2 System Functions; 1.3 The Radio Channel and Modulation Requirements; 1.3.1 Introduction; 1.3.2 Channel Impulse Response; 1.3.3 Doppler Effect; 1.3.4 Transfer Function; 1.3.5 Time Response of Channel Impulse Response and Transfer Function; 1.3.6 Lessons Learned; 1.3.7 Wireless Signal Example: The TDMA System in GSM; 1.3.7.1 Frequency Division Multiple Access (FDMA); 1.3.7.2 Time- Division Multiple Access (TDMA) 1.3.7.3 Code-Division Multiple Access (CDMA)1.3.7.4 TDMA in GSM; 1.3.7.5 TDMA Structure; 1.3.7.6 Bit Synchronization; 1.3.7.7 Compensation of Multipath Reception; 1.3.8 From GSM to UMTS to LTE; 1.4 About Bits, Symbols, and Waveforms; 1.4.1 Introduction; 1.4.1.1 Representation of a Modulated RE Carrier: 1.4.1.2 The Spectrum of a

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	Digitally Modulated Carrier; 1.4.2 Some Fundamentals of Digital Modulation Techniques; 1.4.2.1 Spread-Spectrum and CDMA Modulation Techniques; 1.4.2.2 Orthogonal Frequency Division Modulation (OFDM) and Single- Carrier Frequency-Division Multiple Access (SC-FDMA) 1.5 Analysis of Wireless Systems1.5.1 Analog and Digital Receiver Designs; 1.5.1.1 Receiver Design Examples; 1.5.1.2 PLL CAD Simulation; 1.5.2 Transmitters; 1.5.2.1 Linear Digital Modulation; 1.5.2.2 Digital and Analog FM; 1.5.2.3 Single Sideband AM (SSB-AM); 1.5.2.4 Designing with the SA900; 1.5.2.5 ISM Band Application; 1.6 Building Blocks; 1.7 System Specifications and Their Relationship to Circuit Design; 1.7.1 System Noise and Noise Floor; 1.7.2 System Amplitude and Phase Behavior; 1.8 Testing; 1.8.1 Introduction; 1.8.2 Transmission and Reception Quality; 1.8.3 Base Station Simulation 1.8.4 GSM1.8.5 DECT; 1.9 Converting C/N or SNR to EB/N0; References; Further Reading; 2 Models for Active Devices; 2.1 Diodes; 2.1.1 Large- Signal Diode Model; 2.1.2 Mixer and Detector Diodes; 2.1.2.1 Junction Capacitance; 2.1.2.2 Parameter Trade-Offs; 2.1.2.3 Mixer Diodes; 2.1.2.4 Linear Diode Model; 2.1.3 PIN Diodes; 2.1.3.1 Introduction; 2.1.3.2 Large-Signal PIN Diode Model; 2.1.3.3 Basic Theory: Variable Resistance; 2.1.3.4 Breakdown Voltage, Capacitance, Q Factor; 2.1.3.5 PIN Diode Applications; 2.1.4.5 Distortion Products; 2.1.4.6 Electrical Properties of Tuning Diode Physics; 2.1.4.3 Capacitance; 2.1.4.4 Q Factor or Diode Loss; 2.1.4.5 Distortion Products; 2.1.4.6 Electrical Properties of Tuning Diodes; 2.1.4.7 Diode-Tuned Resonant Circuits; 2.2 Bipolar Transistors; 2.2.1 Transistor Structure Types; 2.2.2 Large-Signal Behavior of Bipolar Transistors; 2.2.2.1 Electrical Characteristics and Specifications; 2.2.3 Large-Signal Transistors in the Forward-Active Region; 2.2.4 Improving RF Performance by Means of Heterostructures 2.2.5 Effects of Collector Voltage on Large-Signal Characteristics in the Forward-Active Region of BJTs
Sommario/riassunto	Provides researchers and engineers with a complete set of modeling, design, and implementation tools for tackling the newest IC technologies Revised and completely updated, RF/Microwave Circuit Design for Wireless Applications, Second Edition is a unique, state-of- the-art guide to wireless integrated circuit design that provides researchers and engineers with a complete set of modeling, design, and implementation tools for tackling even the newest IC technologies. It emphasizes practical design solutions for high-performance devices and circuitry, incorporating ample exa