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Descrizione fisica	1 online resource (XVI, 394 p. 313 illus., 260 illus. in color.)
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Soggetti	Radio circuits - Design and construction
Lingua di pubblicazione	Inglese
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Nota di contenuto	Part I. Basic concepts and Definitions -- Chapter 1. Engineering mathematics -- Chapter 2. Introduction -- Chapter 3. Basic behavioural and device models -- Chapter 4. Multistage Interface -- Chapter 5. Basic Semiconductor Devices -- Chapter 6. Transistor Biasing -- Chapter 7. Review of Basic Amplifiers -- Chapter 8. Introduction to frequency analysis of amplifiers -- Chapter 9. Electrical Noise -- Part II. Radio receiver circuit -- Chapter 10. Radio receiver architecture -- Chapter 11. Electrical Resonance -- Chapter 12. Matching Networks -- Chapter 13. RF and IF Amplifiers -- Chapter 14. Sinusoidal Oscillators -- Chapter 15. Frequency Shifting -- Chapter 16. Modulation -- Chapter 17. AM and FM Signal Demodulation -- Chapter 18. RF Receivers.
Sommario/riassunto	This book is intended for senior undergraduate and graduate students as well as practicing engineers who are involved in design and analysis of radio frequency (RF) circuits. Fully-solved, tutorial-like examples are used to put into practice major topics and to understand the underlying principles of the main sub-circuits required to design an RF transceiver and the whole communication system. Starting with review of principles in electromagnetic (EM) transmission and signal propagation, through detailed practical analysis of RF amplifier, mixer, modulator, demodulator, and oscillator circuit topologies, as well as basics of the system communication theory, this book systematically covers most relevant aspects in a way that is suitable for a single semester

university level course. Readers will benefit from the author's sharp focus on radio receiver design, demonstrated through hundreds of fully-solved, realistic examples, as opposed to texts that cover many aspects of electronics and electromagnetic without making the required connection to wireless communication circuit design. Offers readers a complete, self-sufficient tutorial style textbook; Includes all relevant topics required to study and design an RF receiver in a consistent, coherent way with appropriate depth for a one-semester course; Uses hundreds of fully-solved, realistic examples of radio design technology to demonstrate concepts; Explains necessary physical/mathematical concepts and their interrelationship.
