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Descrizione fisica	1 online resource (XX, 522 p. 364 illus., 287 illus. in color.)
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Nota di contenuto	Part I. Basic concepts and definitions -- Chapter 1. Introduction -- Chapter 2. Basic behavioral and device models -- Chapter 3. Multistage Interface -- Chapter 4. Basic Semiconductor Devices -- Chapter 5. Transistor Biasing -- Chapter 6. Review of Basic Amplifiers -- Chapter 7. Introduction to frequency analysis of amplifiers -- Chapter 8. Electrical Noise -- Part II. Radio receiver circuit -- Chapter 9. Radio receiver architecture -- Chapter 10. Electrical Resonance -- Chapter 11. Matching Networks -- Chapter 12. RF and IF Amplifiers -- Chapter 13. Sinusoidal Oscillators -- Chapter 14. Frequency Shifting -- Chapter 15. Modulation -- Chapter 16. AM and FM Signal Demodulation -- Chapter 17. 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. Detailed tutorials are included on all major topics required to understand fundamental principles behind both the main sub-circuits required to design an RF transceiver and the whole communication system. Starting with review of fundamental principles in electromagnetic (EM) transmission and signal propagation, through detailed practical analysis of RF amplifier, mixer, modulator, demodulator, and oscillator circuit topologies, all the way to the basic

system communication theory behind the RF transceiver operation, this book systematically covers all relevant aspects in a way that is suitable for a single semester university level course. 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; The labs and the book chapters are synchronized throughout a 13-week semester so that the students first study each sub-circuit and the related theory in class, practice problems, work out design details and then build and test the sub-circuit in the lab, before moving onto the next chapter; Includes detailed derivations of all key equations related to new concepts.
