

1. Record Nr.	UNINA9910808704003321
Autore	Bowick Chris
Titolo	RF circuit design [[electronic resource] /] / Chris Bowick
Pubbl/distr/stampa	Amsterdam ; ; London, : Newnes, 2008
ISBN	1-281-06011-9 9786611060114 0-08-055342-7
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (256 p.)
Altri autori (Persone)	BlylerJohn AjluniCheryl J
Disciplina	621.38412
Soggetti	Radio circuits - Design and construction Radio frequency
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Previous ed.: Boston, Mass.: Oxford, Newnes, 1997.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	FRONT COVER; RF CIRCUIT DESIGN; COPYRIGHT PAGE; CONTENTS; PREFACE; ACKNOWLEDGMENTS; CHAPTER 1 Components and Systems; Wire; Resistors; Capacitors; Inductors; Toroids; Toroidal Inductor Design; Practical Winding Hints; CHAPTER 2 Resonant Circuits; Some Definitions; Resonance (Lossless Components); Loaded Q; Insertion Loss; Impedance Transformation; Coupling of Resonant Circuits; Summary; CHAPTER 3 Filter Design; Background; Modern Filter Design; Normalization and the Low-Pass Prototype; Filter Types; Frequency and Impedance Scaling; High-Pass Filter Design; The Dual Network Bandpass Filter DesignSummary of the Bandpass Filter Design Procedure; Band-Rejection Filter Design; The Effects of Finite Q; CHAPTER 4 Impedance Matching; Background; The L Network; Dealing With Complex Loads; Three-Element Matching; Low-Q or Wideband Matching Networks; The Smith Chart; Impedance Matching on the Smith Chart; Software Design Tools; Summary; CHAPTER 5 The Transistor at Radio Frequencies; RF Transistor Materials; The Transistor Equivalent Circuit; Y Parameters; S Parameters; Understanding RF Transistor Data Sheets; Summary; CHAPTER 6 Small-Signal RF Amplifier Design Some DefinitionsTransistor Biasing; Design Using Y Parameters; Design Using S Parameters; CHAPTER 7 RF (Large Signal) Power Amplifiers; RF

Power Transistor Characteristics; Transistor Biasing; RF Semiconductor Devices; Power Amplifier Design; Matching to Coaxial Feedlines; Automatic Shutdown Circuitry; Broadband Transformers; Practical Winding Hints; Summary; CHAPTER 8 RF Front-End Design; Higher Levels of Integration; Basic Receiver Architectures; ADC'S Effect on Front-End Design; Software Defined Radios; Case Study-Modern Communication Receiver; CHAPTER 9 RF Design Tools; Design Tool Basics
Design LanguagesRFIC Design Flow; RFIC Design Flow Example; Simulation Example 1; Simulation Example 2; Modeling; PCB Design; Packaging; Case Study; Summary; APPENDIX A; APPENDIX B; BIBLIOGRAPHY; INDEX; A; B; C; D; E; F; G; H; I; K; L; M; N; O; P; Q; R; S; T; U; V; W; Y

Sommario/riassunto

It's Back! New chapters, examples, and insights; all infused with the timeless concepts and theories that have helped RF engineers for the past 25 years!RF circuit design is now more important than ever as we find ourselves in an increasingly wireless world. Radio is the backbone of today's wireless industry with protocols such as Bluetooth, Wi-Fi, WiMax, and ZigBee. Most, if not all, mobile devices have an RF component and this book tells the reader how to design and integrate that component in a very practical fashion. This book has been updated to include today's integrated c
