

1. Record Nr.	UNINA9910783249203321
Autore	Ranter Carl De
Titolo	High Data Rate Transmitter Circuits [[electronic resource]] : RF CMOS Design and Techniques for Design Automation // by Carl De Ranter, Michiel Steyaert
Pubbl/distr/stampa	Boston, MA : , : Springer US, , 2003
ISBN	0-306-48713-6
Descrizione fisica	1 online resource (XVIII, 227 p.)
Collana	The International Series in Engineering and Computer Science, Analog Circuits and Signal Processing, , 0893-3405 ; ; 747
Disciplina	621.3815
Soggetti	Engineering Computer-aided engineering Manufacturing industries Machines Tools Electrical engineering Electronic circuits Circuits and Systems Electrical Engineering Computer-Aided Engineering (CAD, CAE) and Design Manufacturing, Machines, Tools
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	List of Figures -- List of Tables -- 1: Introduction. 1.1. Some Observations. 1.2. To CMOS or Not to CMOS. 1.3. Covered Topics -- 2: RF Modeling, Quadrature Generation and Flip-Chip Bonding. 2.1. Introduction. 2.2. Influence of Substrate Resistivity on RF-designs. 2.3. RF-Modeling. 2.4. Quadrature LO Generation. 2.5. Manufacturing. 2.6. Conclusions and Use of Presented Topics -- 3: Automated VCO Synthesis. 3.1. Introduction. 3.2. Structured Analog Design Methodology. 3.3. Automation in Functional-Block Design. 3.4. The CYCLONE Tool. 3.5. Final Conclusion -- 4: Voltage-Controlled Oscillators for High Data Rate Applications. 4.1. Oscillators for Broadband Systems. 4.2. Oscillators for RF Frequencies. 4.3.

Conclusions -- 5: Design of an Upconverter for High-Speed Data Transmission. 5.1. Introduction: Market Perspective. 5.2. High-Speed Data Link Systems. 5.3. High-Level Design Considerations. 5.4. CMOS Implementation of a High-Bandwidth Upconverter. 5.5. Final Conclusion -- 6: Conclusions. 6.1. Realized Work. 6.2. Possibilities for Future Research. References.

Sommario/riassunto

High Data Rate Transmitter Circuits is a practical guide and introduction to the design of key RF building blocks used in high data rate transmitters. The emphasis lies on CMOS circuit techniques applicable to oscillators and upconvertors. Furthermore, a method for RF-specific design automation is exemplified by the CYCLONE tool for automated LC-VCO synthesis. Written in an easily accessible manner, High Data Rate Transmitter Circuits is essential reading for both students and practicing engineers interested in analog RF design and RF-specific design automation. The book has been praised for its pleasant and light style of writing, without losing detail on the technical side.
