



Systematic Modeling and Analysis of Telecom Frontends and Their Building Blocks [

Vanassche, Piet

Springer US,
2005

Monografía

To meet the demands of today's highly competitive market, analog electronics designers must develop their IC designs in a minimum of time. The difference between first- and second-time right seriously affects a company's share of the market. Analog designers are therefore in need for structured design methods together with the theory and tools to support them, especially when pushing the performance limits in high-performance designs. Systematic Modeling and Analysis of Telecom Frontends and Their Building Blocks aims to help designers in speeding up telecommunication frontend design by offering an in-depth understanding of the frontend's behavior together with methods and algorithms that support designers in bringing this understanding to practice. The book treats topics such as time-varying phase-locked loop stability, noise in mixing circuits, oscillator injection locking, oscillator phase noise behavior, harmonic oscillator dynamics and many more. In doing so, it always starts from a theoretical foundation that is both rigorous and general. Phase-locked loop and mixer analysis, for example, are grounded upon a general framework for time-varying small-signal analysis. Likewise, analysis of harmonic oscillator transient behavior and oscillator phase noise analysis are treated as particular applications of a general framework for oscillator perturbation analysis. In order to make the book as easy to read as possible, all theory is always accompanied by numerous examples and easy-to-catch intuitive explanations. As such, the book is suited for both computer-aided design engineers looking for general theories and methods, either as background material or for practical implementation in tools, as well as for practicing circuit designers looking for help and insight in dealing with a particular application or a particular high-performance design problem.

<https://rebiunoda.pro.baratznet.cloud:28443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMTM4NDM1NTA>

Título: Systematic Modeling and Analysis of Telecom Frontends and Their Building Blocks [Recurso electrónico-En línea] by Piet Vanassche, Georges Gielen, Willy Sansen

Editorial: Boston, MA Springer US 2005

Descripción física: XIX, 229 p. digital

Tipo Audiovisual: Engineering Engineering design Electronics Engineering Electronic and Computer Engineering Electronics and Microelectronics, Instrumentation Engineering Design

Mención de serie: The Kluwer International Series in Engineering and Computer Science, Analog Circuits and Signal Processing 0893-3405 842

Documento fuente: Springer eBooks

Nota general: Engineering (Springer-11647)

Contenido: Foreword -- Contributing Authors -- Contents -- Symbols and Abbreviations -- 1. Introduction -- 2. Modeling and analysis of telecom frontends: basic concepts -- 3. A framework for frequency-domain analysis of linear periodically timevarying Systems -- 4. Applications of LPTV system analysis using harmonic transfer matrices -- 5. Modeling oscillator dynamic behavior -- 6. Conclusions -- A. HTM norms and the comparison of HTMs -- B. The Sherman-Morisson-Woodbury formula -- C. HTM elements of the linear downconversion mixer -- D. Oscillator dynamics: analysis of the deviation from the attracting manifold -- E. Analysis of a harmonic oscillator -- Bibliography

Restricciones de acceso: Accesible sólo para usuarios de la UPV

Tipo recurso electrónico: Recurso a texto completo

Detalles del sistema: Forma de acceso: Web

ISBN: 9781402031748

Autores: Gielen, Georges Sansen, Willy

Entidades: SpringerLink (Servicio en línea)

Enlace a formato físico adicional: Printed edition 9781402031731

Punto acceso adicional serie-Título: The Kluwer International Series in Engineering and Computer Science, Analog Circuits and Signal Processing 0893-3405 842

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es