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Titolo	Design methodology for RF CMOS phase locked loops / / Carlos Quemada, Guillermo Bistue, Ianigo Adin
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ISBN	1-59693-384-4
Descrizione fisica	1 online resource (242 p.)
Collana	Artech House microwave library
Altri autori (Persone)	BistueGuillermo AdinIanigo
Disciplina	621.3815/364
Soggetti	Metal oxide semiconductors, Complementary - Design and construction Phase-locked loops - Design and construction Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Design Methodology for RF CMOS Phase Locked Loops; Contents; Preface; 1 Approach to CMOS PLL Design; 2 PLL Fundamentals; 3 LC-Tank Integrated Oscillators; 4 Frequency Divider; 5 Phase Frequency Detector/Phase Detector; 6 Determination of Building Blocks Specifications; 7 Design of a 3.2-GHz CMOS VCO; 8 Design of a Frequency Divider; 9 Design of a Phase Frequency Detector; 10 Design of the Complete PLL; 11 PLL Characterization and Results; About the Authors; Index
Sommario/riassunto	Blast through phase-locked loop challenges fast with this practical book guiding you every step of the way from specs definition to layout generation. You get a proven PLL design and optimization methodology that lets you systematically assess design alternatives, predict PLL behavior, and develop complete PLLs for CMOS applications that meet performance requirements no matter what IC challenges you come up against. After a review of PLL essentials, this uniquely comprehensive workbench guide takes you step-by-step through operation principles, design procedures, phase noise analysis, layout considerations, and CMOS realizations for each PLL building block. You get full details on

	LC tank oscillators including modeling and optimization techniques, followed by design options for CMOS frequency dividers covering flip-flop implementation, the divider by 2 component, and other key factors. The book includes design alternatives for phase detectors that feature methods to minimize jitter caused by the dead zone effect. You also find a sample design of a fully integrated PLL for WLAN applications that demonstrates every step and detail right down to the circuit schematics and layout diagrams. Supported by over 150 diagrams and photos, this one-stop toolkit helps you produce superior PLL designs faster, and deliver more effective solutions for low-cost integrated circuits in all RF applications.

2. Record Nr. UNISA996213067903316

Titolo	Inductively coupled plasma spectrometry and its applications [[electronic resource] /] / edited by Steve J. Hill
Pubbl/distr/stampa	Oxford, : Blackwell, 2007
ISBN	1-280-74867-2 9786610748679 0-470-98879-7 9780470988794
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (447 p.)
Collana	Analytical chemistry
Disciplina	543.65 543/.65 643.65
Soggetti	Inductively coupled plasma spectrometry Inductively coupled plasma mass spectrometry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Previous ed.: Sheffield: Sheffield Academic Press, 1999
Nota di bibliografia	Includes bibliographical references and index
Nota di contenuto	Inductively Coupled Plasma Spectrometry and its Applications; Contents; Contributors; Preface; 1 Introduction - A Forward-Looking Perspective; 1.1 Introduction; 1.2 Extrapolation of past and current trends; 1.2.1 Influences from science and technology; 1.2.2 Influences

from society, politics, and the economy; 1.2.3 Past and current trends in atomic spectrometry; 1.3 Influence of technology transfer; 1.3.1 Electronics and data manipulation; 1.3.2 Metal-binding structures; 1.3.3 Novel separation methods; 1.3.4 Detector technologies; 1.4 Strengths and weaknesses of ICP-AES and ICP-MS
1.4.1 Strengths and weaknesses of ICP-AES1.4.2 Strengths and weaknesses of ICP-MS; 1.4.3 ICP limitations; 1.5 Potential directions in ICP spectrometry; 1.6 Concluding considerations; References; 2 Fundamental Principles of Inductively Coupled Plasmas; 2.1 Principles to inductively coupled plasma generation; 2.2 Equilibrium in a plasma; 2.3 Line intensities; 2.4 Line profiles; 2.5 Temperature definitions; 2.6 Temperature measurements; 2.6.1 Kinetic temperature measurement; 2.6.2 Rotational temperature measurement; 2.6.3 Excitation temperature; 2.6.3.1 Boltzmann plot; 2.6.3.2 Line pair method
2.6.4 Electron temperature2.7 Electron number density measurement; 2.8 Ionic to atomic line intensity ratio; 2.9 Active methods; 2.9.1 Laser-induced fluorescence; 2.9.2 Light scattering; 2.10 Spatial profiles; 2.11 Temperature and electron number densities observed in analytical ICPs; 2.12 Plasma perturbation; 2.13 Multiline diagnostics; References; 3 Basic Concepts and Instrumentation for Plasma Spectrometry; 3.1 Detection limits and sensitivity; 3.1.1 ICP-Atomic emission spectrometry; 3.1.2 Limits of detection; 3.1.3 Axial systems; 3.1.4 The sample introduction system; 3.1.5 Detectors
3.2 Accuracy and precision3.2.1 Instrumental drift; 3.2.2 Matrix effects; 3.2.3 Plasma effects; 3.2.4 Spectral effects, interferences and background correction; 3.2.5 Dynamic range; 3.2.6 ICP-MS; 3.3 Multi-element capability and selectivity; 3.4 Instrumental overview; 3.5 Radio-frequency generators; 3.6 Torches; 3.7 Spectrometers; 3.7.1 Line isolation; 3.7.2 Monochromators; 3.7.3 Polychromators; 3.8 Detectors; 3.8.1 Photomultiplier tubes; 3.8.2 Solid-state detectors; 3.9 Nebulisers and spray chambers; 3.10 Read-out devices, instrument control and data processing; 3.11 Radial and axial plasmas
3.12 Instrumentation for high-resolution spectrometry3.13 Micro-plasmas and plasma on a chip; References; 4 Aerosol Generation and Sample Transport; 4.1 Introduction; 4.2 Sample introduction characteristics of the ICP source; 4.2.1 Particle size distribution; 4.2.2 Plasma loading; 4.3 Liquid aerosol generation; 4.3.1 Pneumatic nebulization; 4.3.1.1 Pneumatic nebulizer designs; 4.3.1.2 Ultrasonic nebulizers; 4.3.1.3 Alternative nebulizer designs; 4.3.2 Spray chambers; 4.3.2.1 Mode of operation; 4.3.2.2 Practical designs of spray chambers; 4.3.2.3 Desolvation; 4.3.3 Chromatographic interfaces
4.4 Vapour generation

Sommario/riassunto

The first edition of Inductively Coupled Plasma Spectrometry and its Applications was written as a handbook for users who wanted a better understanding of the theory augmented by a practical insight of how best to approach a range of applications, and to provide a useful starting point for users trying an approach or technique new to them. These objectives have been retained in the second edition but a slight shift in emphasis gives the volume an overall perspective that is more forward looking.Structured into 11 chapters, the current edition is a thorough revision of the original, cov