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Sommario/riassunto	This book introduces an intuitive, self-sustained oscillator model and applies it to describe some of the most critical performance metrics of LC oscillators, such as phase noise, entrainment, and pulling. It also covers the related topics of magnetic coupling and inductor design. The author emphasizes the basic principles and illuminates them with approximate calculations, adopting a design-oriented approach that imparts intuition and complements simulations. This book constitutes a novel and fresh perspective on the subject and can be helpful to electrical engineering students and practicing engineers. It also serves as a bridge between the mathematical treatises of the subject and the more practical circuit-oriented approaches. Introduces the Van der Pol self-sustained oscillator model and explains its use to describe practical LC oscillators. Discusses the fundamentals of oscillator noise

using the complementary approaches of dissipation and fluctuation. Models the oscillator as a phase point moving along its limit cycle and introduces the Phase Dynamics Equation. Explains the noise to phase noise conversion as a two-step process and delves into computing phase noise due to tank noise, transconductor thermal and flicker noise, supply, and bias noise. Highlights the vital role of the oscillator's common-mode behavior in converting low-frequency noise to phase noise. Applies the Phase Dynamics Equation to describe oscillator entrainment and pulling. Discusses methods to reduce magnetic coupling and includes a self-contained introduction to the design of integrated inductors. .