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| | Nota di contenuto | Chapter 1.Introduction and Problem Statement -- Chapter 2. Electronic Oscillator Fundamentals -- Chapter 3. Automated S Parameter Free Electronic Oscillator Design, Performance Evaluation Scheme and Step-by-Step Design Examples Using SPICE, Discrete Fourier Transform (DFT). |
| | Sommario/riassunto | This book demonstrates a novel, efficient and automated scheme to design and evaluate the performance of electronic oscillators, operating at the 100s of Megahertz to 10s of Gigahertz frequencies. The author describes a new oscillator design and performance evaluation scheme that addresses all the issues associated with the traditional S parameter (large, small signal) based oscillator design technique by exploiting the properties of a new breed of RF or microwave transistors, the powerful Discrete Fourier Transform and the SPICE tool's transient analysis. Readers will benefit from an exhaustive set of detailed, step-by-step |

oscillator (feedback, negative resistance, crystal and differential) design examples, as well as the software tools (C executables) used to create the design examples. Designers will be enabled to eliminate the complexities of the traditional oscillator design/performance evaluation scheme using S (large, small) parameter, resulting in accurate, robust and reliable designs. Describes an efficient, automated oscillator design and performance evaluation scheme that addresses all the challenges associated with the traditional S parameter (large, small signal) based oscillator design; Provides numerous step-by-step design examples, illustrating the details of the new scheme presented; Includes C executables that run on both Linux and Windows, which the reader can use to experiment and design any oscillator (feedback common emitter or base, negative resistance common emitter or base or differential).