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Nota di contenuto	Contents; About the Author; Preface; Acknowledgements; 1 Nonlinear circuit design methods; 1.1 SPECTRAL-DOMAIN ANALYSIS; 1.1.3 Trigonometric identities; 1.1.2 Piecewise-linear approximation; 1.1.3 Bessel functions; 1.2 TIME-DOMAIN ANALYSIS; 1.3 NEWTON-RAPHSON ALGORITHM; 1.4 QUASILINEAR METHOD; 1.5 VAN DER POL METHOD; 1.6 COMPUTER-AIDED ANALYSIS AND DESIGN; REFERENCES; 2 Oscillator operation and design principles; 2.1 STEADY-STATE OPERATION MODE; 2.2 START-UP CONDITIONS; 2.3 OSCILLATOR CONFIGURATIONS AND HISTORICAL ASPECTS; 2.4 SELF-BIAS CONDITION 2.5 OSCILLATOR ANALYSIS USING MATRIX TECHNIQUES 2.5.1 Parallel feedback oscillator; 2.5.2 Series feedback oscillator; 2.6 DUAL TRANSISTOR OSCILLATORS; 2.7 TRANSMISSION-LINE OSCILLATOR; 2.8 PUSH-PUSH OSCILLATOR; 2.9 TRIPLE-PUSH OSCILLATOR; 2.10

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Sommario/riassunto

The increase of consumer electronics and communications applications using Radio Frequency (RF) and microwave circuits has implications for oscillator design. Applications working at higher frequencies and using novel technologies have led to a demand for more robust circuits with higher performance and functionality, but decreased costs, size and power consumption. As a result, there is also a need for more efficient oscillators. This book presents up to date information on all aspects of oscillator design, enabling a selection of the best oscillator topologies with optimized noise reduction.
