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| Nota di contenuto | 1. Linear Techniques -- 1.1. Open-Loop Method -- 1.2. Starting Conditions -- 1.3. Random Resonator and Amplifier Combination -- 1.4. Naming Conventions --<br>2. Nonlinear Techniques -- 2.1. Introduction -- 2.2. Harmonic Balance Overview -- 2.3. Nonlinear Amplifiers -- 2.4. Nonlinear Open-Loop Cascade --<br>3. Transient Techniques -- 3.1. Introduction -- 3.2. Starting Modes -- 3.3. Starting Basic Example -- 3.4. Simulation Techniques --<br>4. Noise -- 4.1. Definitions -- 4.2. Predicting Phase Noise -- 4.3. Measuring Phase Noise -- 4.4. Designing for Low Phase Noise -- 4.5.<br>5. General-Purpose Oscillators -- 5.1. Comments on the Examples -- 5.2. Oscillators Without Resonators -- 5.3. L-C Oscillators -- 5.4. Oscillator Topology Selection --<br>6. Distributed Oscillators -- 6.1. Resonator Technologies -- 6.2. Lumped and Distributed Equivalents -- 6.3. Quarter-Wavelength Resonators -- 6.4. Distributed Oscillator Examples --<br>7. Tuned Oscillators -- 7.1. Resonator Tuning Bandwidth -- 7.2. Resonator Voltage -- 7.3. Permeability Tuning -- 7.4. Tunable Oscillator Examples --<br>8. Piezoelectric Oscillators -- 8.1. Bulk Quartz Resonators -- 8.2. Fundamental Mode Crystal Oscillators -- 8.3. Overtone Mode Crystal Oscillators -- 8.4. Crystal Oscillator Examples Summary --<br>Appendix A. Modeling -- A.1. Capacitors -- A.2. Varactors -- A.3. |

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| | Inductors -- A.4. Helical Transmission Lines -- |
| Sommario/riassunto | "Written by a recognized expert in the field, this authoritative one-stop resource covers the practical design of high-frequency oscillators with lumped, distributed, dielectric, and piezoelectric resonators. Including numerous examples, the book details important linear, nonlinear harmonic balance, transient, and noise analysis techniques. Moreover, the book shows engineers how to apply these techniques to a wide range of oscillators. Professionals gain the knowledge needed to create unique designs that elegantly match their specification needs. Over 350 illustrations and more than 200 equations support key topics throughout the book."--Jacket. |