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Practical Design of Measuring Signal Generators.

Sommario/riassunto The book brings together the following issues: Theory of deterministic,

random and discrete signals reproducible in oscillatory systems of generators; Generation of periodic signals with a specified spectrum, harmonic distortion factor and random signals with specified probability density function and spectral density; Synthesis of

oscillatory system structures; Analysis of oscillatory systems with nonlinear elements and oscillation amplitude stabilization systems; It considers the conditions and criteria of steady-state modes in signal generators on active four-pole elements with unidirectional and bidirectional transmission of signals and on two-pole elements; analogues of Barkhausen criteria; Optimization of oscillatory system structures by harmonic distortion level, minimization of a frequency error and set-up time of the steady state mode; Theory of construction of random signal generators; Construction of discrete and digital signal generators; Practical design of main units of generators; Practical block diagrams of both analog and digital signal generators.