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3.18 WEAK LAW OF LARGE NUMBERS; References; Appendix 3A: Maximum-Likelihood Frequency Estimator; Appendix 3B: Phase Probability Density Function for Sine Wave in AWGN; CHAPTER 4 Noise in PLL-Based Systems; 4.1 INTRODUCTION; 4.2 SOURCES OF NOISE; 4.3 POWER SPECTRAL DENSITY CONCEPT FOR CONTINUOUS-TIME STOCHASTIC SIGNALS.
4.4 POWER SPECTRAL DENSITY FOR DISCRETE-TIME SAMPLED SYSTEMS4.5 PHASE NOISE FIRST PRINCIPLES; 4.6 RANDOM PHASE NOISE; 4.7 NOISE IMPRESSION ON TIME AND FREQUENCY SOURCES; References; Appendix 4A: Review of Stochastic Random Processes; Appendix 4B: Accurate Noise Modeling for Computer Simulations; Appendix 4C: Creating Arbitrary Noise Spectra in a Digital Signal Processing Environment; Appendix 4D: Noise in Direct Digital Synthesizers; CHAPTER 5 System Performance; 5.1 SYSTEM PERFORMANCE OVERVIEW; 5.2 INTEGRATED PHASE NOISE; 5.3 LOCAL OSCILLATORS FOR RECEIVE SYSTEMS.
5.4 LOCAL OSCILLATORS FOR TRANSMIT SYSTEMS5.5 LOCAL OSCILLATOR PHASE NOISE IMPACT ON DIGITAL COMMUNICATION ERROR RATE PERFORMANCE; 5.6 PHASE NOISE EFFECTS ON OFDM SYSTEMS; 5.7 PHASE NOISE EFFECTS ON SPREAD-SPECTRUM SYSTEMS; 5.8 PHASE NOISE IMPACT FOR MORE ADVANCED MODULATION WAVEFORMS; 5.9 CLOCK NOISE IMPACT ON DAC PERFORMANCE; 5.10 CLOCK NOISE IMPACT ON ADC PERFORMANCE; References; Appendix 5A: Image Suppression and Error Vector Magnitude; Appendix 5B: Channel Capacity and Cutoff Rate; CHAPTER 6 Fundamental Concepts for Continuous-Time Systems; 6.1 CONTINUOUS VERSUS DISCRETE TIME.

Sommario/riassunto

From cellphones to micrprocessors, to GPS navigation, phase-lock techniques are utilized in most all modern electronic devices. This high-level book takes a systems-level perspective, rather than circuit-level, which differentiates it from other books in the field.