1. Record Nr. UNINA9910299860203321 Autore Zhao Feng Titolo Low-Noise Low-Power Design for Phase-Locked Loops: Multi-Phase High-Performance Oscillators / / by Feng Zhao, Fa Foster Dai Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2015 **ISBN** 3-319-12200-2 Edizione [1st ed. 2015.] 1 online resource (106 p.) Descrizione fisica Disciplina 620 621.381 621.3815 621.382 Soggetti Electronic circuits **Electronics** Microelectronics Signal processing Image processing Speech processing systems Circuits and Systems Electronics and Microelectronics, Instrumentation Signal, Image and Speech Processing Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di contenuto Introduction -- Analysis of Quantization Noise Reduction Techniques for Fractional-N PLL -- A Wide-Band 0.13µm SiGe BiCMOS PLL for X-Band Radar -- Design and Analysis of QVCO with Different Coupling Techniques -- Design and Analysis of a 0.6V QVCO with Capacitive-Coupling Technique -- Conclusions. This book introduces low-noise and low-power design techniques for Sommario/riassunto phase-locked loops and their building blocks. It summarizes the noise

reduction techniques for fractional-N PLL design and introduces a novel

capacitive-quadrature coupling technique for multi-phase signal generation. The capacitive-coupling technique has been validated

through silicon implementation and can provide low phase-noise and accurate I-Q phase matching, with low power consumption from a super low supply voltage. Readers will be enabled to pick one of the most suitable QVCO circuit structures for their own designs, without additional effort to look for the optimal circuit structure and device parameters.