

Abstracts

Ultra-Linear Chirp Generation via VCO Tuning Predistortion

P.J. Burke. "Ultra-Linear Chirp Generation via VCO Tuning Predistortion." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 957-960.

The multiple signal dynamic range and frequency resolution of wide bandwidth compressive receivers (CR), two key parameters of surveillance systems, have historically been limited by swept local oscillator (SLO) performance. Noise, spurious signals, and nonlinear frequency-time slopes in the SLO have been the cause of these limitations. This paper describes a technique to generate an SLO for a CR application which improves the multiple signal dynamic range by 15 dB over previous techniques at a much lower cost, and with less complexity. This technique for high speed linear chirp generation also has application FMCW or pulse compression radar systems.

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