# Abstracts

## Analysis of CDMA signal spectral regrowth and waveform quality (Dec. 2001 [T-MTT])

*V. Aparin. "Analysis of CDMA signal spectral regrowth and waveform quality (Dec. 2001 [T-MTT])." 2001 Transactions on Microwave Theory and Techniques 49.12 (Dec. 2001 [T-MTT] (Special Issue on 2001 International Microwave Symposium)): 2306-2314.*

Closed-form expressions for the spectral regrowth and waveform quality of a reverse-link code divison multiple access (CDMA) signal passed through a weakly nonlinear circuit are derived using the power series and statistical methods. The third-order nonlinearity is expressed in terms of IP/sub 3/ to include the memory effects of the circuit in-band and out-of-band reactances. The analysis is based on a time-domain model of the signal that gives more accurate distortion estimates than the widely used Gaussian approximation. The model is used to derive the probability density function and other statistical properties of the CDMA signal to compare them to the Gaussian noise properties. Differences in statistics and distortions of OQPSK and QPSK modulated signals are discussed.

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