

Abstracts

Nonlinear amplifier effects in communications systems

Cheng-Po Liang, Je-Hong Jong, W.E. Stark and J.R. East. "Nonlinear amplifier effects in communications systems." 1999 Transactions on Microwave Theory and Techniques 47.8 (Aug. 1999 [T-MTT] (Mini-Special Issue on Low-Power/Low-Noise Technologies for Mobile Wireless Communications)): 1461-1466.

This paper introduces a figure-of-merit to investigate tradeoffs between amplifiers and modulation waveforms in complex digital communications systems. Class-AB amplifiers are investigated with a variety of modulation schemes to better understand the relations between amplifier efficiency, amplifier distortion, signal in-band and adjacent channel interference, and power consumption. The goal is to better understand the tradeoffs needed to design low-energy communications systems.

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