Abstracts

Evaluating co-channel distortion ratio in microwave power amplifiers

J.C. Pedro and N. Borges de Carvalho. "Evaluating co-channel distortion ratio in microwave power amplifiers." 2001 Transactions on Microwave Theory and Techniques 49.10 (Oct. 2001, Part I [T-MTT] (Mini-Special Issue on Electrical Performance of Electronic Packaging (EPEP))): 1777-1784.

Laboratory results, obtained with a novel setup for a corrected co-channel distortion ratio, validate the idea that no matter the notch width, a conventional noise-power-ratio test produces optimistic small-signal in-band distortion measurements, when compared to a hypothetical continuous spectrum excitation test by the authors. This paper also generalizes previous memoryless mildly nonlinear behavior predictions to saturated and frequency-dependent regimes. Finally, a close agreement between measurement results and harmonic-balance simulated data provided an alternative means of corrected co-channel power-ratio evaluation.

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