Abstracts

Measurement technique for characterizing memory effects in RF power amplifiers

J.H.K. Vuolevi, T. Rahkonen and J.P.A. Manninen. "Measurement technique for characterizing memory effects in RF power amplifiers." 2001 Transactions on Microwave Theory and Techniques 49.8 (Aug. 2001 [T-MTT] (Mini-Special Issue on the 2000 IEEE Radio and Wireless Conference (RAWCON))): 1383-1389.

Memory effects are defined as changes in the amplitude and phase of distortion components caused by changes in modulation frequency. These are particularly important in cancelling linearizer systems, e.g., when distortion is reduced by similar distortion in the opposite phase. This paper begins by describing electrical and electrothermal causes for memory effects. A three-tone test setup is then constructed to measure the phase of third-order intermodulation distortion products. This paper also presents the measured results for a bipolar junction transistor and a MESFET amplifier.

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