Abstracts

Amplifier linearization using simultaneous harmonic and baseband injection

Chun-Wah Fan and K.-K.M. Cheng. "Amplifier linearization using simultaneous harmonic and baseband injection." 2001 Microwave and Wireless Components Letters 11.10 (Oct. 2001 [MWCL]): 404-406.

A novel linearization scheme utilizing injection of distortion signal at the input of amplifier is described. Harmonic and baseband signal generated by predistortion circuits is fed to the input of the main amplifier and by controlling the power level of the harmonic and baseband signal properly, mixing products can be made to cancel out with the FET inherent distortion signals. Unlike many other techniques, no precise phase adjustment is required for the RF signal path. For verification, the two-tone performance of a constructed linearized amplifier is measured and a reduction of the third-order IMD power level of about 27 dB is observed.

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