Abstracts

Feedforward amplifier for WCDMA base stations with a new adaptive control method

Young Yun Woo, Youngoo Yang, Jaehyok Yi, Joongjin Nam, Jeong Hyeon Cha and Bumman Kim. "Feedforward amplifier for WCDMA base stations with a new adaptive control method." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 769-772 vol.2.

This paper describes a feedforward amplifier with a new adaptive control method. For the modulated signal with a high peak-to-average ratio, the residual output error level of the feedforward amplifier can be further reduced by adjusting the 1st loop control parameters to have an imperfect signal cancellation since an error amplifier generates less distortion in the case. For verification, a baseband signal simulation and experiments have been performed. A 30 W feedforward amplifier for WCDMA base stations at 2.14 GHz shows a 4 dB improvement of linearization when it is controlled by the proposed method.

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