Abstracts

New linearization method for the modulated signals with high peak-to-average ratio: peak-to-average ratio reduction and expansion

Youngoo Yang, Young Yun Woo, Jeonghyeon Cha, Jaehyok Yi and Bumman Kim. "New linearization method for the modulated signals with high peak-to-average ratio: peak-to-average ratio reduction and expansion." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 777-780 vol.2.

A new linearization method for the high power amplifier modulated by a high peak-to-average ratio signal is proposed. The amplifier consists of a high power amplifier with a predistorter, a peak power limiter, and cancellation loops similar to the feedforward amplifier. The linearization performance is enhanced by reducing the peak input power to the amplifier using a rate limiter and the distortion from the limited signal is restored at the cancellation sub-path. Simulation and experimental results for the amplifier module with WCDMA signal show a significant improvement of ACLR.

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