Abstracts

Ultra-linear distributed class-AB LDMOS RF power amplifier for base stations

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This paper describes a distributed amplifier, employing multiple parallel-connected LDMOS devices with optimized overall transconductance for class-AB operation. In comparison to a conventional amplifier under class-A and class-AB conditions the design method results in a significant linearity improvement over a large dynamic range. Measurements demonstrate a linearity improvement of 20 dB in 3/sup rd/-order intermodulation distortion (IM3) and 10 dB in adjacent channel power ratio (ACPR) for a wideband CDMA signal. Consequently, a reduction in the required back-off level has been achieved.

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