Abstracts

A monolithic Si PCS-CDMA power amplifier with 30% PAE at 1.9 GHz using a novel biasing scheme

Sifen Luo and T. Sowlati. "A monolithic Si PCS-CDMA power amplifier with 30% PAE at 1.9 GHz using a novel biasing scheme." 2001 Transactions on Microwave Theory and Techniques 49.9 (Sep. 2001 [T-MTT] (Mini-Special Issue on the 2001 IEEE Radio Frequency Integrated Circuit (RFIC) Symposium)): 1552-1557.

A monolithic Si personal-communication system-CDMA power amplifier (PA) capable of delivering 28.2-dBm output power with 30% power-added efficiency and -45-dBc adjacent-channel-power ratio at 1.9 GHz and 3.6-V supply voltage is presented for the first time in this paper. The PA implemented in a 30-GHz BiCMOS process incorporates a novel impedance-controllable biasing scheme to control the class of operation and bias impedance of the output stage. Both simulated and measured results are presented for comparison.

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