Abstracts

Silicon RF GCMOS performance for portable communications applications (1997 Vol. I [MWSYM])

E. Spears, D. Ngo, Jun Ma, Han-Bin Liang, D. Spooner, J. Ford, S. Cheng, B. Courson, B. Yeung, J. Avalrez, J. Bhalla and D. Lamey. "Silicon RF GCMOS performance for portable communications applications (1997 Vol. I [MWSYM])." 1997 MTT-S International Microwave Symposium Digest 1. (1997 Vol. I [MWSYM]): 1-4.

A submicron silicon Radio Frequency Graded Channel MOS (RFGCMOS) technology has been developed for portable communications applications. A 12 mm device at 900 MHz has +29 dBm output power with 12 dB gain and 78% power added efficiency (PAE) at a drain to source voltage of 3.4 V, and drain to source quiescent current of 150 mA. A 256 /spl mu/m device at 900 MHz has 18.9 dB of small signal gain and an associated noise figure of 1.1 dB at VDS=3.0 volts and IDS=2 mA.

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