Abstracts

A Low Power GaAs MESFET Monolithic Downconverter for Digital Handheld Telephone Applications

J. Birkeland. "A Low Power GaAs MESFET Monolithic Downconverter for Digital Handheld Telephone Applications." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 1105-1107.

A monolithic GaAs MESFET downconverter for 1.9 GHz digital handheld telephone applications has been designed and fabricated. The downconverter operates from a single supply, and uses no dual gate or series biased FETs, which allows operation at lower supply voltages. The circuit exhibits 22 dB of conversion gain and 3.9 dB noise figure at a bias of 2.7 V and 5 mA, with a LO drive of -10 dBm. For a supply voltage of 1.25 V and a LO drive level of -13 dBm, conversion gain of 17.2 dB and noise figure of 4.3 dB is obtained.

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