

Abstracts

A single-chip 1.9 GHz RF transceiver MMIC using GaAs MESFET

Huainan Ma, Rajinder Singh, Kai Tuan Yan, Sher Jiun Fang, Fujiang Lin, Khen-Sang Tan, J. Shibata, A. Tamura and H. Nakamura. "A single-chip 1.9 GHz RF transceiver MMIC using GaAs MESFET." 1998 Radio Frequency Integrated Circuits (RFIC) Symposium 98. (1998 [RFIC]): 101-104.

This paper presents a newly developed single-chip RF transceiver MMIC for 1.9 GHz PHS wireless communications using a GaAs MESFET technology. The MMIC features a complete RF transceiver which includes an SPDT switch, a 2-stage LNA, a down-mixer, a double balanced up-mixer, an AGC amplifier and a 2-stage PA with an automatic gate-bias control circuit. The transceiver also features on-chip 50 Ω impedance matching, with a chip size of 9.3 mm² and packaged in a 48 pin TQFP with heat sink.

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