Abstracts

Wideband GaAs MMIC Receiver (1987 [MCS])

D.C. Yang, R. Esfandiari, T.S. Lin and T. O'Neill. "Wideband GaAs MMIC Receiver (1987 [MCS])." 1987 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 87.1 (1987 [MCS]): 101-103.

A wideband GaAs MMIC receiver module has been developed using half-micron gate MESFET technology. The fabrication process used is optical lithography with ion-implanted undoped LEC GaAs wafers. The module consists of three generic monolithic chips: an RF amplifier, an IF amplifier, and an image rejection filter which is integrated on a dual-gate MESFET mixer chip. The RF input frequency is 6 to 10 GHz and the IF output is at 3 GHz. Test results have shown an overall conversion gain of more than 20 dB, and less than a 5.5 dB noise figure. The isolation batwean RF and IF ports is better than 22 dB, between LO and IF is more than 30 dB, and between LO and RF isolation is 20 dB. The DC functional yield of more than 70-80% has also been achieved for each chip type.

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