

Abstracts

GaAs MMIC for Digital Radio Frequency Memory (DRFM) Subsystems

G.K. Lewis, I.J. Bahl and E.L. Griffin. "GaAs MMIC for Digital Radio Frequency Memory (DRFM) Subsystems." 1987 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 87.1 (1987 [MCS]): 53-56.

A DRFM analog subsystem comprising of 10 GaAs MMIC chips (six limiting amplifiers, one quadrature IF downconverter, two IF amplifiers, and one quadrature upconverter) has been developed and integrated into an 11.8cm³ (.72 in³) module. The input signal dynamic range for the module is 50 dB from 2-6 GHz, the image sideband rejection is 20 dB typical, and the LO to RF isolation is 27 dB minimum. The quadrature IF downconverter and quadrature upconverter in MMIC form are reported for the first time and operated as designed with good performance.

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