

Abstracts

SiGe MMICs and flip-chip MICs for low-cost microwave systems

M. Case. "SiGe MMICs and flip-chip MICs for low-cost microwave systems." 1997 Radio Frequency Integrated Circuits (RFIC) Symposium 97. (1997 [RFIC]): 117-120.

Recent Progress in SiGe device technology has improved cutoff frequencies of these devices to beyond 200 GHz. This work describes two approaches for implementing distributed structures with Si substrates: microstrip transmission lines using thick polyimide over a ground plane on the substrate (polyimide MMIC) and small Si devices or chips flip-chip mounted onto a microwave circuit board containing the distributed elements (flip-chip MIC). Microwave circuits such as amplifiers, oscillators, mixers, and frequency dividers have been demonstrated using both techniques.

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