Abstracts

K-band Si/SiGe HBT MMIC amplifiers using lumped passive components with a micromachined structure

Liang-Hung Lu, Jae-Sung Rieh, P. Bhattacharya, L.P.B. Katehi, E.T. Croke, G.E. Ponchak and S.A. Alterovitz. "K-band Si/SiGe HBT MMIC amplifiers using lumped passive components with a micromachined structure." 1998 Radio Frequency Integrated Circuits (RFIC) Symposium 98. (1998 [RFIC]): 17-20.

Using Si/SiGe heterojunction bipolar transistors with a maximum oscillation frequency of 52 GHz and a novel structure for passive components, a two-stage K-band lumped-element amplifier has been designed and fabricated on high-resistivity Si substrates. The chip size including biasing and RF chokes is 0.92/spl times/0.67 mm/sup 2/.

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