Abstracts

S- and X-Band GaAs FET Mixers with Thin-Film Lumped Elements (Short Papers)

H. Ohnishi and S. Yamashita. "S- and X-Band GaAs FET Mixers with Thin-Film Lumped Elements (Short Papers)." 1984 Transactions on Microwave Theory and Techniques 32.1 (Jan. 1984 [T-MTT]): 135-138.

The design and performance of 2- and 11-GHz band mixers with a single-gate GaAs FET are presented in this paper. A mixer configuration in which the load oscillator (LO) signal is applied to the source is used. Matching networks are constructed with thin-film lumped elements fabricated on alumina. An SSB noise figure of 6.2 dB, with an associated conversion gain of 10 dB, has been achieved at the 11-GHz band, and SSB noise figures of less than 6 dB and a conversion gain of more than 8 dB over a 40-percent bandwidth are obtained at the 2-GHz band.

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