Abstracts

Performance of GaAs MESFET Mixers at X Band

R.A. Pucel, D. Masse and R. Bera. "Performance of GaAs MESFET Mixers at X Band." 1976 Transactions on Microwave Theory and Techniques 24.6 (Jun. 1976 [T-MTT] (Special Issue on Microwave Field-Effect Transistors)): 351-360.

A theoretical analysis and experimental verification of the signal properties of the GaAs MESFET mixer are presented. Experimental techniques for evaluating some of the mixer parameters are described. Experiments performed on GaAs MESFET mixers at X band show that good noise performance and large dynamic range can be achieved with conversion gain. A conversion gain over 6 dB is measured at 7.8 GHz. Noise figures as low as 7.4 dB and output third-order intermodulation intercepts of +18 dBm have heen obtained at 8 GHz with a balanced MESFET mixer.

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