Abstracts

20-GHz Band Monolithic GaAs FET Low-Noise Amplifier

A. Higashisaka and T. Mizuta. "20-GHz Band Monolithic GaAs FET Low-Noise Amplifier." 1981 Transactions on Microwave Theory and Techniques 29.1 (Jan. 1981 [T-MTT]): 1-6.

A 20-GHz band monolithic GaAs FET low-noise amplifier has been developed. Design and fabrication were performed by obtaining the transmission properties of the microstrip lines on a semi-insulating GaAs substrate. The developed monolithic amplifier consists of a submicron gate GaAs MESFET and the input and output distributed matching circuits on a semi-insulating GaAs substrate measuring 2.75 mm x 1.45 mm. A noise figure of 6.2dB and an associated gain of 7.5 dB were obtained at 21 GHz without any additional tuning adjustments.

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