

Abstracts

MESFET Distributed Amplifier Design Guidelines

J.B. Beyer, S.N. Prasad, R.C. Becker, J.E. Nordman and G.K. Hohenwarter. "MESFET Distributed Amplifier Design Guidelines." 1984 Transactions on Microwave Theory and Techniques 32.3 (Mar. 1984 [T-MTT] (Special Issue on Power and Low-Noise GaAs FET Circuits and Applications)): 268-275.

In the paper, the analysis of GaAs MESFET distributed amplifiers and a systematic approach to their design are presented. The analysis focuses on fundamental design considerations and also establishes the maximum gain-bandwidth product of the amplifier. The design approach presented enables one to examine the tradeoffs between the variables, such as the device, the number of devices, and the impedances and cutoff frequency of the lines, and arrive at a design which gives the desired frequency response. Excellent agreement is shown when the theoretically predicted response of a typical amplifier is compared with computer-aided analysis results, and good agreement is shown with previously published experimental results.

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