

Abstracts

A High Performance 2-18.5 GHz Distributed Amplifier, Theory and Experiment (1986 [MCS])

T. McKay and R. Williams. "A High Performance 2-18.5 GHz Distributed Amplifier, Theory and Experiment (1986 [MCS])." 1986 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 86.1 (1986 [MCS]): 27-31.

A high performance 2-18.5 GHz monolithic GaAs MESFET distributed amplifier has been designed and fabricated. The m-derived drain line design is analyzed theoretically and a closed form gain equation is presented. Theoretical predictions are compared to measured results and more complicated CAD models. The measured small signal gain is typically $8.0 \pm 0.25\text{dB}$ from 2-18.5 GHz at standard bias. Typical input return loss is greater than 12dB and the output return loss is greater than 15dB. The saturated output power is in excess of 23dBm over most of the band and the noise figure is less than 7.5dB.

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