

Abstracts

The Design and Performance of Large Signal Distributed Microwave Amplifiers

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Large signal models of microwave power MESFETs have been developed. The models match closely measured D.C. and R.F. characteristics of the device. The complete distributed microwave amplifier was simulated using a non-linear simulation program. Three circuits were built and results show good agreement with predicted performances. Power outputs up to 0.7 Watt were obtained over the range 2-6 GHz using 3 MESFETs per circuit. The non-linear simulation was able to predict the dynamic range, the power gain, fundamental and harmonic power outputs to a reasonable degree of accuracy.

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