

Abstracts

An Improved Analytical AC Large-Signal Model for the GaAs MESFET

A. Madjar. "An Improved Analytical AC Large-Signal Model for the GaAs MESFET." 1989 Transactions on Microwave Theory and Techniques 37.10 (Oct. 1989 [T-MTT]): 1519-1522.

Currently, the analysis of nonlinear microwave networks is a topic of much research effort and has produced many efficient and useful algorithms. To apply these algorithms, it is necessary to use an efficient model for each nonlinear device used. The modeling of MESFET's has been dealt with quite extensively in recent years, including a continuous effort by the author. In a recent publication, an efficient analytical model was presented. In the present paper, an improved model is described. The new model is basically the same as the previous one, except that a better expression is used for the conduction current calculation. The accuracy and applicability of the model are demonstrated by a set of simulation results and by comparison to measurement.

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