Abstracts

An Improved GaAs MESFET Model for SPICE (Short Papers)

A.J. McCamant, G.D. McCormack and D.H. Smith. "An Improved GaAs MESFET Model for SPICE (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.6 (Jun. 1990 [T-MTT]): 822-824.

A SPICE model has been developed to more accurately model GaAs MESFET devices. In particular, small-signal parameters such as the S parameters are accurately modeled over a wide range of bias conditions. These results were achieved by modifying the Statz model equations to better represent the variation of I/sub ds/ as a function of the applied voltage. The model applies over a large range of pinch-off voltages, allows size scaling of devices, and is suited for modeling R/sub ds/ changes with frequency. The Statz equatious are used to represent diode characteristics and capacitive components of the model.

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