Abstracts

A Heterojunction Bipolar Transistor Large-Signal Model for High Power Microwave Applications

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A large-signal model is presented for HBT's. The model accounts for self-heating effects and is based on the Gummel-Poon formulation. Full model compatibility with the commercially available software package LIBRA is ensured. The model incorporates temperature dependence for most of its parameters and has been employed for the analysis of the DC and microwave power characteristics of AlGaAs/GaAs HBT's. Good agreement between simulated and directly meaaured DC and microwave characteristics support the validity of the model.

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