Abstracts

Investigation and Modeling of Impact Ionization with Regard to the RF- and Noise Behaviour of HFET

R. Reuter, M. Agethen, U. Auer, S. van Waasen, D. Peters, W. Brockerhoff and F.J. Tegude. "Investigation and Modeling of Impact Ionization with Regard to the RF- and Noise Behaviour of HFET." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1317-1320.

A new small-signal and noise equivalent circuit for Heterostructure Field-Effect Transistors (HFET), including the influence of impact ionization and gate-leakage current on the electronic properties, is presented. The capability of the new model is demonstrated by bias-dependent investigations of the RF- and noise behaviour of InAlAs/InGaAs/InP-HFET.

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