Abstracts

Distributed Small Signal Model for Multi-Fingered GaAs PHEMT/MESFET Devices

S.J. Nash, A. Platzker and W. Struble. "Distributed Small Signal Model for Multi-Fingered GaAs PHEMT/MESFET Devices." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 1075-1078.

A fully distributed equivalent circuit PHEMT and MESFET model is presented in closed form expressions for single finger end-fed FET geometry. The model includes self and mutual inductances and a new frequency dependent gate resistance. The model was used successfully to model multi-fingered devices which were subjected to equi-phase gate and drain excitations. Comparisons between measured data and model results are shown to be in excellent agreement for all S-parameters to 50GHz regardless of unit gate width. Scaling issues are also investigated for the new distributed model.

❑ Return to main document.