

Abstracts

Efficient Large-Signal FET Parameter Extraction Using Harmonics (1989 Vol. II [MWSYM])

J.W. Bandler, Q.J. Zhang, S. Ye and S.H. Chen. "Efficient Large-Signal FET Parameter Extraction Using Harmonics (1989 Vol. II [MWSYM])." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 577-580.

We present a novel approach to large-signal nonlinear parameter extraction of GaAs MESFET devices measured under harmonic conditions. Powerful nonlinear adjoint-based optimization simultaneously processes multi-bias, multi-power-input, multi-fundamental-frequency excitations and multi-harmonic measurements to uniquely reveal the parameters of the intrinsic FET. One test successfully processed 111 error functions of 20 model parameters. The technique has been implemented in a new program called HarPE.

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