Abstracts

A Large Signal Physical MESFET Model for CAD and its Applications

R.R. Pantoja, M.J. Howes, J.R. Richardson and C.M. Snowden. "A Large Signal Physical MESFET Model for CAD and its Applications." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 573-576.

A quasi-static, large-signal MESFET circuit model has been developed. It is based on a comprehensive quasi-two-dimensional semi-classical device physical simulation where its unique formulation and efficiency makes it suitable for the CAD of nonlinear MESFET subsystems. A single/two-tone harmonic balance analysis procedure which employs the describing frequency concept has also been developed and combined with the MESFET model. Numerical load-pull contours, as well as intermodulation distortion contours, have been simulated and comparing these with measured results substantiates the approach taken.

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