Abstracts

Nonlinear Yield Analysis and Optimization of Monolithic Microwave Integrated Circuits (Short Papers)

In this paper, a discussion about nonlinear yield evaluation and nonlinear yield optimization of MMIC circuits using a physics-based nonlinear lumped-element MESFET model is presented. The lumped elements of the MESFET model are directly calculated by closed expressions related to process parameters. One of the main features of the model is the easy and effective implementation in commercial CAD tools. It allows the use of nonlinear yield algorithms assuming, as statistical variables, the parameters of the technological process, such as: doping density, gate channel length, etc., maintaining at the same time, the advantages of lumped-element MESFET model, in particular fast computation and reduction of convergence problems in harmonic balance for complex circuit topologies.

❏ Return to main document.

Click on title for a complete paper.