Abstracts

Approximation of state functions in measurement-based transistor model

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This paper investigates the use of approximation of state functions in measurement-based transistor models. This is especially important when these models are used in third-order intermodulation distortion simulations since the dynamical spline interpolation that is typically used has possible large discontinuities in its third-order derivative. We, therefore, propose a new representation of the state functions in our model and offer a comparison between measurement and simulation to prove the validity of our approach. Also, our model can easily be implemented in any commercially available SPICE simulator, which also is a significant advantage.

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