Abstracts

Implementation of a scalable and statistical VBIC model for large-signal and intermodulation distortion analysis of SiGe HBTs

M. Ramana Murty, K.M. Newton, S.L. Sweeney, D.C. Sheridan and D.L. Harame. "Implementation of a scalable and statistical VBIC model for large-signal and intermodulation distortion analysis of SiGe HBTs." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 2165-2168 vol.3.

This work examines for the first time the utility of the VBIC model for the analysis of 2-tone intermodulation distortion behavior of SiGe HBTs. The model takes into account all important effects for accurate modeling of large signal behavior including self-heating, weak-avalanche multiplication, quasi-saturation effects, and all device capacitances. Periodic-Steady State and Harmonic Balance simulations are performed and the model is validated by load-pull measurements.

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