Abstracts

Validation of an analytical large signal model for AlGaN/GaN HEMTs

B.M. Green, Hyungtak Kim, K.K. Chu, H.S. Lin, V. Tilak, J.R. Shealy, J.A. Smart and L.F. Eastman. "Validation of an analytical large signal model for AlGaN/GaN HEMTs." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 761-764.

An analytical nonlinear model describing AlGaN/GaN HEMTs grown on sapphire substrates has been extracted based on measured device data. The model accounts for dispersion in transconductance and output conductance present in the devices. Model validations based on comparisons with DC I-V, S-parameter, 4 GHz time-domain waveforms, and 7 GHz power sweep data show good agreement between the model predictions and measurements.

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