Abstracts

Extensions of the Chalmers Nonlinear HEMT and MESFET Model

I. Angelov, L. Bengtsson and M. Garcia. "Extensions of the Chalmers Nonlinear HEMT and MESFET Model." 1996 Transactions on Microwave Theory and Techniques 44.10 (Oct. 1996, Part I [T-MTT]): 1664-1674.

The ability to simulate temperature, dispersion, and soft-breakdown effects as well as a new a dependence was added to the Chalmers nonlinear model for high electron mobility transistor (HEMT's) and metal semiconductor field-effect transistor (MESFET's). DC, pulsed dc, low frequency (10 Hz-10 MHz), RF, and small signal S-parameter measurements (1-18 GHz) have been made on a large number of commercial HEMT and MESFET devices from different manufacturers in the temperature range 17-400 K in order to evaluate the validity of the model extensions.

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