Abstracts

A nonlinear model of the power MESFET including temperature and breakdown effects

V. Rizzoli, A. Costanzo, C. Cecchetti and A. Chiarini. "A nonlinear model of the power MESFET including temperature and breakdown effects." 1998 MTT-S International Microwave Symposium Digest 98.3 (1998 Vol. III [MWSYM]): 1603-1606.

The paper discusses a new large-signal MESFET model based on DC, S-parameter and nonlinear measurements. Physical constraints incorporated in the constitutive relations guarantee the model consistency in large-signal operation and improve the reliability of the parameter extraction process. Forward and reverse (breakdown) gate conduction effects are modeled from nonlinear data. Extensive comparisons with experimental results are presented.

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