Abstracts

A dynamical load-cycle charge model for RF power FETs

J.M. Collantes, P. Bouysse, J. Portilla and R. Quere. "A dynamical load-cycle charge model for RF power FETs." 2001 Microwave and Wireless Components Letters 11.7 (Jul. 2001 [MWCL]): 296-298.

A nonlinear charge model for RF power FETs is presented. The model, intended for use in harmonic-balance simulators, calculates the time evolution of the nonlinear charge in a period of the steady-state regime. For that, the experimentally extracted capacitances are integrated using the device dynamic load cycle as integration path. The proposed approach is technology independent and it has been applied here to a Si LDMOSFET and a SiC MESFET. Load pull measurements have been performed to verify the validity of the model.

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