Abstracts

New measurement-based technique for RF LDMOS nonlinear modeling

J.M. Collantes, J.J. Raoux, R. Quere and A. Suarez. "New measurement-based technique for RF LDMOS nonlinear modeling." 1998 Microwave and Guided Wave Letters 8.10 (Oct. 1998 [MGWL]): 345-347.

In this letter a new look-up table model is developed for the nonlinear modeling of radio frequency (RF) LDMOS transistors. The modeling technique is based on the use of approximation splines that are coupled to a pulsed I-V characterization setup. It provides a very fast modeling procedure, while avoiding the appearance of undesired ripples in the modeled functions. The technique has been applied to a RF LDMOS technology for L-band applications, obtaining excellent results in the prediction of both the small- and large-signal transistor responses. This technique is specially suitable for fast-evolution technologies.

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