# Abstracts

## A 110 GHz scalable FET model based on 50 GHz S-parameter measurements

*A. Cidronali, G. Collodi, A. Santarelli and G. Vannini. "A 110 GHz scalable FET model based on 50 GHz S-parameter measurements." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1377-1380.*

Electron device modeling is a challenging task at millimeter frequencies. Conventional approaches based on lumped equivalent circuits become inappropriate to describe possible complex distributed effects, which may strongly affect the electrical transistor performance. Moreover, standard network analyzers do not allow for low-cost device characterization solutions at very high frequencies. In the paper it is shown how an empirical, scalable distributed model based on standard S-parameter measurements up to 50 GHz can be efficiently exploited to obtain very accurate small-signal predictions up to 110 GHz. Experimental validation is presented for Philips 0.2 /spl mu/m PHEMT devices. Practical consideration on the best criteria for model extraction are also provided in the paper.

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