Abstracts

Improved HEMT model for low phase-noise InP-based MMIC oscillators

D. Schreurs, H. van Meer, K. van der Zanden, W. De Raedt, B. Nauwelaers and A. Van de Capelle. "Improved HEMT model for low phase-noise InP-based MMIC oscillators." 1998 Transactions on Microwave Theory and Techniques 46.10 (Oct. 1998, Part II [T-MTT] (Special Issue on New Developments in the Design of Microwave and Millimeter-Wave Oscillators)): 1583-1585.

This paper focuses on two modeling aspects to improve the accuracy of low phase-noise monolithic-microwave integrated-circuit (MMIC) oscillator design. Up until now, the modeling of InP-based high electron mobility transistors (HEMTs) has mainly been limited to the representation of small-signal and thermal noise behavior. In this paper, we present a scaleable nonlinear and bias-dependent low-frequency (LF) noise model.

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