Abstracts

A New Method for On Wafer Noise Measurement

G. Dambrine, H. Happy, F. Danneville and A. Cappy. "A New Method for On Wafer Noise Measurement." 1993 Transactions on Microwave Theory and Techniques 41.3 (Mar. 1993 [T-MTT]): 375-381.

A new method for measuring the noise parameters of MESFET's and HEMT's is presented. This new method is based on the fact that only three independent noise parameters are sufficient to fully describe the device noise performance. It is shown that two noise parameters (R/sub n/ and |Y/sub opt/|) can be directly obtained from the frequency variation of the noise figure F/sub 50/ corresponding to a 50 omega generator impedance. By using a theoretical relation between the intrinsic noise sources as additional data, the F/sub 50/ measurement only can provide the four noise parameters. A good agreement with more conventional techniques is obtained.

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