Abstracts

Accurate Modeling of Noise Fluctuations in mm-Wave Semiconductor Devices and Their Spatial and Frequency Dependence

A. Abou-Elnour and K. Schunemann. "Accurate Modeling of Noise Fluctuations in mm-Wave Semiconductor Devices and Their Spatial and Frequency Dependence." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1719-1722.

A rigorous model is developed to determine the noise fluctuations in millimeter-wave semiconductor devices and their spatial and frequency dependence. First the model is generally described and then it is applied to characterize the operation and to accurately interpret the noise performance of sub-quarter micrometer gate-length FETs by making use of the noise matrix which describes the noise fluctuations in the different device regions and electrodes and their correlations.

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