Abstracts

Efficient modeling of microscopic and macroscopic noise behavior of submicron-highly-doped semiconductor devices at millimeter-wave frequencies

A. Abou-Elnour, D. Liebig and K. Schunemann. "Efficient modeling of microscopic and macroscopic noise behavior of submicron-highly-doped semiconductor devices at millimeter-wave frequencies." 1997 MTT-S International Microwave Symposium Digest 3. (1997 Vol. III [MWSYM]): 1289-1292.

An efficient rigorous physical simulator is developed to determine both microscopic and macroscopic noise behavior of submicron and highly doped semiconductor devices at millimeter-wave frequencies. The model is applied to determine the internally generated microscopic noise in the different device regions and their correlation with the externally measured noise fluctuations at the device terminals. Finally, both bias and frequency dependence of important noise parameters are extracted.

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