Abstracts

Accurate and Efficient Modeling of Hetero-FETs

A. Abou-Elnour and K. Schuenemann. "Accurate and Efficient Modeling of Hetero-FETs." 1993 MTT-S International Microwave Symposium Digest 93.3 (1993 Vol. III [MWSYM]): 1177-1180.

Efficient numerical methods which are usually used in e.m. field problems are applied to solve Schroedinger's equation in semiconductors. The energy band structure of microwave heterostructure FETs is obtained by solving Poisson's and Schroedinger's equations self-consistently. The obtained results are used together with a two dimensional Monte-Carlo code to simulate the physical operation of the device. The model offers an accurate and efficient way to determine the DC and RF characteristics.

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