Abstracts

Modeling on Statistical Distribution of Noise Parameters in Pulse-Doped GaAs MESFETs

N. Shiga, S. Nakajima, K. Otobe, T. Sekiguchi, N. Kuwata, K.-I. Matsuzaki and H. Hayashi. "Modeling on Statistical Distribution of Noise Parameters in Pulse-Doped GaAs MESFETs." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 655-658.

Process-related variation of noise parameters in pulse-doped GaAs MESFETs is discussed in this paper. Fluctuation in gate length of the proposed devices is shown to be a dominant source of variation in noise parameters. The statistical distribution of the minimum noise figure (Fmin) is modeled and the probability density function is described. Comparison between the calculated result of the derived equation and the measured distribution of Fmin is also shown.

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