Abstracts

Empirical Modeling of Low-Frequency Dispersive Effects Due to Traps and Thermal Phenomena in III-V FETs (1995 Vol. III [MWSYM])

F. Filicori, G. Vannini, A. Santarelli, A. Mediavilla, A. Tazon and Y. Newport. "Empirical Modeling of Low-Frequency Dispersive Effects Due to Traps and Thermal Phenomena in III-V FETs (1995 Vol. III [MWSYM])." 1995 MTT-S International Microwave Symposium Digest 95.3 (1995 Vol. III [MWSYM]): 1557-1560.

An empirical approach is proposed which accounts for low-frequency dispersive phenomena due to surface state densities, deep level traps and device heating, in the modeling of the drain current response of III-V FETs. The model, which is based on mild assumptions justified both by theoretical considerations and experimental results, has been applied to GaAs MESFETs of different manufacturers. Experimental and simulation results that confirm the validity of the model are provided in the paper.

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