

Abstracts

Ultra-Low Noise HEMT Device Models: Application of On-Wafer Cryogenic Noise Analysis and Improved Parameter Extraction Techniques

J.J. Bautista, M. Hamai, M. Nishimoto, J. Laskar, P. Szydlík and R. Lai. "Ultra-Low Noise HEMT Device Models: Application of On-Wafer Cryogenic Noise Analysis and Improved Parameter Extraction Techniques." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 935-938.

Significant advances in the development of HEMT technology have resulted in high performance cryogenic, LNAs whose noise temperatures are within an order of magnitude of the quantum noise limit ($h\nu/k$). Key to the identification of optimum HEMT structures at cryogenic temperatures is the development of on-wafer noise and device parameter extraction techniques.

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