Abstracts

FET's and HEMT's at Cryogenic Temperatures - Their Properties and Use in Low-Noise Amplifiers (1987 Vol. II [MWSYM])

M.W. Pospieszalski and S. Weinreb. "FET's and HEMT's at Cryogenic Temperatures - Their Properties and Use in Low-Noise Amplifiers (1987 Vol. II [MWSYM])." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 955-958.

This paper reviews the performance of a number of FET’s and HEMT's at cryogenic temperatures. Typical d.c. characteristics and X-band noise parameters are presented and qualitatively correlated wherever possible with other technological or experimental data. While certain general trends can be identified, further work is needed to explain a number of observed phenomena. Design examples of three-stage, X-band HEMT and FET amplifiers are briefly discussed. Typical noise temperatures at 8.4 GHz areT/sub n/ = 22K, for all FET amplifiers and 11K for amplifier with HEMT’s in the input stage.

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