Abstracts

Ku-Band Super Low-Noise Pseudomorphic Heterojunction Field-Effect Transistors (HJFET) with High Producibility and High Reliability

T. Tokue, Y. Nashimoto, T. Hirokawa, A. Mese, S. Ichikawa, H. Negishi, T. Toda, T. Kimura, M. Fujita, I. Nagasako and T. Itoh. "Ku-Band Super Low-Noise Pseudomorphic Heterojunction Field-Effect Transistors (HJFET) with High Producibility and High Reliability." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 705-708.

This paper reports newly developed Ku-band super low-noise pseudomorphic heterojunction FETs (HJFET) with high producibility and high reliability, utilizing a novel electron beam lithography technique. The developed HJFETs with 0.25µm long and 200µm wide gate FETs showed average noise figure of 0.6 dB with 11.3 dB average associated gain at 12GHz, and exhibited high reliable operation with MTTF (mean time to failure) of 3x10/sup 9/ hours at 100° C.

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