Abstracts

Low Noise HEMTs with Multi - Feed Gate Configurations

K. Hosogi, T. Katoh, T. Kashiwa, H. Matsuoka, H. Minami, K. Kosaki, K. Nagahama, K. Nishitani and M. Otsubo. "Low Noise HEMTs with Multi - Feed Gate Configurations." 1991 MTT-S International Microwave Symposium Digest 91.3 (1991 Vol. III [MWSYM]): 1279-1282.

A novel multi-feed gate configuration using air-bridge metallization is demonstrated for low noise HEMTs. The configuration is designed according to the detailed analysis of parasitic gate capacitances. Very low noise figures of 0.55 and 1.6dB have been achieved at 12 and 40GHz for 0.25µm gate AlGaAs/InGaAs pseudomorphic HEMT, respectively. The noise figure of 4.1dB and the gain of 12.2dB at 40GHz are also obtained for the 2-stage HEMT MMICs.

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