Abstracts

Low-Noise MESFET's for Ion-Implanted GaAs MMIC's

A.K. Gupta, D.P. Siu, K.T. Ip and W.C. Petersen. "Low-Noise MESFET's for Ion-Implanted GaAs MMIC's." 1983 Transactions on Microwave Theory and Techniques 31.12 (Dec. 1983 [T-MTT] (1983 Symposium Issue)): 1072-1076.

Fabrication considerations for low-noise FET's in ion-implanted GaAs monolithic microwave integrated circuits (MMIC's) are presented. Processes that can deteriorate FET performance have been identified and some solutions proposed. Low-noise MMIC FET's fabricated along these lines show good microwave performance tbrongh 18 GHz, approaching the performance available from similar discrete FET's. 0.8- µm gate-length MMIC FET’s with a noise figure of 2.9 dB and associated gain of 6.1 dB at 18 GHz have been fabricated. These devices are suitable for low-noise applications in ion-implanted GaAs MMIC’s.

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