Abstracts

Microwave Performance of Ion-Implanted 0.25-Micron MESFET for Low-Cost Applications Low-Power Gate GaAs MMIC's

P.J. Apostolakis, J. Middleton, J. Kruse, D. Scherrer, D. Barlage, M. Feng and A.N. Lepore. "Microwave Performance of Ion-Implanted 0.25-Micron MESFET for Low-Cost Applications Low-Power Gate GaAs MMIC's." 1993 Microwave and Guided Wave Letters 3.8 (Aug. 1993 [MGWL]): 278-280.

Low-power microwave performance of an enhancement mode (E-mode) ion implanted GaAs MESFET is reported. The 0.25-µm x 100-µm E-MESFET has a threshold voltage of V/sub th/ = 0.0 V. At 1.0 mW operation of power with a bias condition of V/sub ds/ = 0.5 V and I/sub ds/ = 2 mA, a noise figure of 0.85 dB with an associated gain of 15 dB was measured at 4 GHz. These results demonstrate the GaAs E-MESFET is an excellent choice for low power personal communication applications.

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