Abstracts

The Influence of Ion-Implanted Profiles on the Performance of GaAs MESFET's and MMIC Amplifiers

D. Pavlidis, J.-L. Cazaux and J. Graffeuil. "The Influence of Ion-Implanted Profiles on the Performance of GaAs MESFET's and MMIC Amplifiers." 1988 Transactions on Microwave Theory and Techniques 36.4 (Apr. 1988 [T-MTT]): 642-652.

The RF small-signal performance of GaAs MESFET's and MMIC amplifiers as a function of various ion-implanted profiles is theoretically and experimentally investigated. Implantation energy, dose, and recess depth influence are theoretically analyzed with the help of a specially developed device simulator. The performance of MMIC amplifiers processed with various energies, doses, recess depths, and bias conditions is discussed and compared to experimental characteristics. Some criteria are finally proposed for the choice of implantation conditions and process in order to optimize the characteristics of ion-implanted FET's and to realize process-tolerant MMIC amplifiers.

❑ Return to main document.