Abstracts

Evaluation of MESFET nonlinear intermodulation distortion reduction by channel-doping control

J.C. Pedro. "Evaluation of MESFET nonlinear intermodulation distortion reduction by channel-doping control." 1997 Transactions on Microwave Theory and Techniques 45.11 (Nov. 1997 [T-MTT]): 1989-1997.

This paper is intended to evaluate the linearity that can be provided by general-purpose MESFETs. By a simple physics-based analysis and a practical amplifier design, it will be shown how educated device and bias-point selection can approximate intermodulation distortion (IMD) performance of some normal channel-doping profiles, for which previous theories would not be able to predict good IMD performance, to the one expected from MESFET devices with specially tailored doping profiles.

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