Abstracts

Gate-Drain Breakdown Effects Upon the Large Signal Performance of GaAs MESFETs

T.A. Winslow, D. Fan and R.J. Trew. "Gate-Drain Breakdown Effects Upon the Large Signal Performance of GaAs MESFETs." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 315-318.

GaAs MESFETs often demonstrate a negative break-down slope characteristic. This slope can be critical in determining the RF performance of MESFET amplifiers. It is demonstrated that as the breakdown slope decreases, RF power performance is degraded. Tuning is also important because this adjusts the load line to allow maximum voltage and current swings on the drain. Reverse breakdown followed by foward gate conduction are confirmed to be the main saturation mechanisms for GaAs MESFETs.

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