Abstracts

Effect of Distributed Gate Diode on MESFET Power Performance Evaluated by Harmonic Balance Simulation

P.M. White. "Effect of Distributed Gate Diode on MESFET Power Performance Evaluated by Harmonic Balance Simulation." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 611-614.

A mechanism for power limitation in GaAs MESFETs which arises from the distributed conduction properties of the resistive gate diode is evaluated using harmonic balance simulation in conjunction with a distributed diode model. It is shown that 1 dB compressed power output and peak efficiency depend on unit gate finger width which has significance for device layout and choice of gate technology in high-power applications. The simulation results are supported by experimental data.

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