Abstracts

Nonlinear GaAs MESFET Modeling Using Pulsed Gate Measurements (1988 Vol. I [MWSYM])

M. Paggi, P.H. Williams and J.M. Borrego. "Nonlinear GaAs MESFET Modeling Using Pulsed Gate Measurements (1988 Vol. I [MWSYM])." 1988 MTT-S International Microwave Symposium Digest 88.1 (1988 Vol. I [MWSYM]): 229-231.

The effects of traps in GaAs MESFETs are studied using a pulsed gate measurement system. The devices are pulsed into the active region for 1µs and are held in the cut-off region for the rest of a 1ms period. While the devices are on, the drain current is sampled and a series of "pulsed gate" I-V curves are obtained and compared to conventional static I-V curves. The static and pulsed gate curves were used in a nonlinear time domain analysis model to predict harmonic content. The results showed that models which used the pulsed gate I-V curves to represent the nonlinear drain current yielded better predictions of harmonic distortion than models which used conventional I-V curves.

❑ Return to main document.