

Abstracts

Backgating in GaAs MESFET's

C. Kocot and C.A. Stolte. "Backgating in GaAs MESFET's." 1982 *Transactions on Microwave Theory and Techniques* 30.7 (Jul. 1982 [T-MTT] (Joint Special Issue on GaAs IC's)): 963-968.

The phenomenon of backgating in GaAs depletion mode MESFET devices is investigated. The origin of this effect is electron trapping on the Cr/sup 2+/ and EL(2) levels at the semi-insulating substrate-channel region interface. A model describing backdating, based on DLTS and spectral measurements, is presented. Calculations based on this model predict that closely compensated substrate material will minimize backgating. Preliminary experimental data support this prediction.

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