Abstracts

GaAs Semi-Insulated-Gate FETs (SIGFETs) as High Power MMIC Control Devices

Y. Yong-Hoon and R.J. Gutmann. "GaAs Semi-Insulated-Gate FETs (SIGFETs) as High Power MMIC Control Devices." 1988 MTT-S International Microwave Symposium Digest 88.2 (1988 Vol. II [MWSYM]): 997-1000.

GaAs planar Semi-Insulated-Gate FETs (SIG-FETs) have been fabricated with higher CW power handling capability than, and similar switching frequency figure-of-merit as, comparable GaAs recess-gate MESFETs. Initially developed SIGFET devices demonstrated 3dB to 5dB increase in power handling capability with a switching frequency figure-of-merit of 362GHz. This improved power performance is due chiefly to the semi-insulated layer under the gate metal, which allows higher gate-breakdown voltage as well as higher drain saturation current.

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