Abstracts

High Efficiency GaAs MBE Power FETs for Ka-Band (1984 [MCS])

J. Geddes, V. Sokolov, T. Contolatis, J. Abrokwah and W. Larson. "High Efficiency GaAs MBE Power FETs for Ka-Band (1984 [MCS])." 1984 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 84.1 (1984 [MCS]): 87-90.

Submicron gate length, 300 micron gate width GaAs FETs were fabricated on MBE material using direct write e-beam lithography. Evaluation of the devices in a Ka-band test fixture with fin line transitions resulted in an amplifier output power of 110 mw with 11 percent power added efficiency at 30 GHz. At 2.9 dB gain the power per unit gate width is .46 W/mm referenced to the device. This is the highest power output per unit gate width reported to date for a GaAs FET at Ka-band.

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