Abstracts

High Efficiency Mode Characterization in a 20 GHz MBE GaAs IMPATT Diode Amplifier

H. Kondoh, J. Berenz, T. Hierl, G.C. Dalman and C.A. Lee. "High Efficiency Mode Characterization in a 20 GHz MBE GaAs IMPATT Diode Amplifier." 1981 MTT-S International Microwave Symposium Digest 81.1 (1981 [MWSYM]): 238-240.

A high efficiency mode in a 20 GHz MBE-grown single drift GaAs Read-type IMPATT diode has been observed by using a computer-aided characterization system. The intrinsic diode is estimated to have 2 W power capability with 26% efficiency at 22 GHz. The diode was tested in a modified top-hat amplifier circuit to demonstrate 3.1 GHz bandwidth at 3.7 dB gain with 3 W maximum output power.

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