Abstracts

High Peak Pulse Power Silicon Double-Drift IMPATT Diodes

G. Pfund and R. Curby. "High Peak Pulse Power Silicon Double-Drift IMPATT Diodes." 1979 Transactions on Microwave Theory and Techniques 27.5 (May 1979 [T-MTT] (Special Issue on Solid-State Microwave/Millimeter-Wave Power Generation, Amplification, and Control)): 450-451.

The performance of high peak pulse power silicon double-drift IMPATT devices operated at medium pulse repetition frequency are discussed. Several devices were characterized and achieved more than 45-W peak pulse power with 10-percent duty cycle at 9.7 GHz. Conversion efficiencies in the order of 9.7-11.2 percent were observed. These results compare with previously reported 19-W peak power, 10-percent duty-cycle, and 9.5-percent efficiency.

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