Abstracts

Millimeter-Wave CW IMPATT Diodes and Oscillators

T.A. Midford and R.L. Bernick. "Millimeter-Wave CW IMPATT Diodes and Oscillators." 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)): 483-492.

This paper summarizes the current state of the art of silicon CW millimeter-wave IMPATT diodes and oscillators in the frequency range from 30 to 250 GHz. Design procedures, fabrication, and packaging technology are reviewed, and the current performance of diode oscillators is reported. A brief account of present device reliability is also presented. The contrast between maturing device technology below 100 GHz and largely laboratory-based technology at higher frequencies is discussed. Finally, a prognosis of future developments is offered.

❑ Return to main document.