Abstracts

The Behavior of a Pulsed Millimeter Wave (70 Ghz) Impatt Diode Oscillator During Laser Illumination

H.W.A. Gerlach and R. Wellman. "The Behavior of a Pulsed Millimeter Wave (70 Ghz) Impatt Diode Oscillator During Laser Illumination." 1980 MTT-S International Microwave Symposium Digest 80.1 (1980 [MWSYM]): 70-72.

The effect of photon injection on a 70-GHz pulsed IMPATT diode was investigated. With the diode mounted in a waveguide oscillator, two useful modes of operation, the "enhancement" mode and the "inhibition" mode, were observed. The enhancement mode permits fast on and off switching (and modulation) of the IMPATT diode oscillator. The inhibition mode permits pulse width control and reduction of undesired intrapulse frequency shift (chirp).

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