Abstracts

Photoconductive Impulse Generation and Radiation

A. Kim, R.J. Youmans, R. Zeto, M. Weiner, J. Fishback, J. Tsinetakes and B. Lalevic. "Photoconductive Impulse Generation and Radiation." 1991 Transactions on Microwave Theory and Techniques 39.12 (Dec. 1991 [T-MTT] (1991 Symposium Issue)): 2026-2030.

The generation of extremely narrow, high peak power pulses using an optically activated impulse generator has been demonstrated. Radiative measurements at 1 Hz PRF have been conducted at pulse bias levels up to 15 kV, using an optical pulse from a Nd:YAG laser to trigger the device. The measured pulse from a wide-band antenna had a pulsewidth of 1.5 ns with a risetime of 900 ps. The frequency spectrum of this radiated waveform ranged from 50 MHz to 1 GHz.

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