Abstracts

Generation of High-Power Broad-Band Microwave Pulses by Picosecond Optoelectronic Technique

H.A. Sayadian, M.G. Li and C.H. Lee. "Generation of High-Power Broad-Band Microwave Pulses by Picosecond Optoelectronic Technique." 1989 Transactions on Microwave Theory and Techniques 37.1 (Jan. 1989 [T-MTT]): 43-50.

A single-picosecond GaAs photoconductive switch (PS) is used to pulse excite a microwave resonant cavity, thus generating a variety of RF waveforms with picosecond synchronization. The length of the transmission line that connects the photoconductive switch and the cavity, and the strength of input/output cavity coupling elements provide for continuous variation of the frequency distribution of the generated RF power. The generation of over 7 kW, the peak-to-peak voltage over 1.2 kV, of broad-band microwave bursts is demonstrated.

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