Abstracts

Performance and Optimization of Gunn Self-Oscillating Mixer

J. Krasavin and H. Hinrikus. "Performance and Optimization of Gunn Self-Oscillating Mixer." 1995 Microwave and Guided Wave Letters 5.6 (Jun. 1995 [MGWL]): 177-179.

Dependence of performance of a Gunn Doppler self-oscillating mixer on the oscillator loaded quality factor, bias voltage and bias circuit resistance is investigated theoretically and experimentally. The analysis is based on consideration of stability principle and average voltage-current characteristic of a Gunn oscillator. Location of the operating point of the best performance of a Gunn Doppler self-oscillating mixer is defined. Results of the work can be used for tuning a Gunn Doppler self-oscillating mixer.

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