Abstracts

Fundamental Wave Injection Locked 2nd Harmonic Gunn Oscillators at 94 GHz

H. Barth. "Fundamental Wave Injection Locked 2nd Harmonic Gunn Oscillators at 94 GHz." 1984 MTT-S International Microwave Symposium Digest 84.1 (1984 [MWSYM]): 391-393.

A new frequency processing system for mm-wave coherent Radar system is discussed briefly to demonstrate the utility of fundamental wave injection locked second harmonic Gunn oscillators. The design and performance of this type of oscillator is the subject of the presented paper. In a CW-mode the oscillator has an output power of 10 dBm which is sufficient to serve as the LO of a balanced mixer. In a pulsed mode (duration 90 nsec, PRF=50 kHz) the oscillator delivers about 15 dBm with a phase ripple below ±4°. The suitability of this pulsed oscillator to drive a 3 stage 30 dB injection locked impatt amplifier is shown.

❑ Return to main document.