Abstracts

Millimeter and Submillimeter Wave Quasi-Optical Oscillator with Multi-Elements (1990 Vol. III [MWSYM])

M. Nakayama, M. Hieda, T. Tanaka and K. Mizuno. "Millimeter and Submillimeter Wave Quasi-Optical Oscillator with Multi-Elements (1990 Vol. III [MWSYM])." 1990 MTT-S International Microwave Symposium Digest 90.3 (1990 Vol. III [MWSYM]): 1209-1212.

Multi-elements oscillator with quasi-optical resonator is reported. The resonator consists of a Fabry-Perot cavity with a grooved mirror. It has capability for power-combing of solid-state sources in the millimeter wave region. X-band models consisting of Gunn diodes or GaAs MESFET's are demonstrated. Power combining and frequency-locking of 18 diodes and 6 FET's have been successfully observed. 50 GHz-band Gunn diode oscillator with the resonator is also reported.

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