Abstracts

Frequency Triplers and Quadruplers with GaAs Schottky-Barrier Diodes at 450 and 600 GHz

T. Takada and M. Ohmori. "Frequency Triplers and Quadruplers with GaAs Schottky-Barrier Diodes at 450 and 600 GHz." 1979 Transactions on Microwave Theory and Techniques 27.5 (May 1979 [T-MTT] (Special Issue on Solid-State Microwave/Millimeter-Wave Power Generation, Amplification, and Control)): 519-523.

Submillimeter-wave solid-state sources have been developed with a frequency tripler and a frequency quadrupler driven by an 150-GHz band IMPATT oscillator. The tripler and quadrupler delivered an output power of -9.3 dBm at 447 GHz with a conversion loss of 20 dB, and -28 dBm at 589 GHz with a conversion loss of 39 dB, respectively. The frequency multiplication was performed by use of GaAs-Ni-Au schottky-barrier diodes with junction diameter of 1-3 mu m and hybrid integrated circuit techniques.

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