

# Abstracts

## Submillimeter Wave Frequency Multipliers and IMPATT Oscillators

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*M. Hirayama, T. Takada, T. Ishibashi and M. Ohmori. "Submillimeter Wave Frequency Multipliers and IMPATT Oscillators." 1978 MTT-S International Microwave Symposium Digest 78.1 (1978 [MWSYM]): 435-437.*

GaAs frequency multipliers up to 600 GHz and Si p<sup>+</sup>-n-n<sup>+</sup> IMPATT oscillators up to 430 GHz were developed. An output power of 0.12 mW at 450 GHz was obtained by the tripler using a thin film integrated circuit and a GaAs honeycomb-type Schottky barrier diode. The IMPATT oscillator cooled by liquid nitrogen delivered 2.2 mW at 412 GHz with 0.047 conversion efficiency.

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