

Hybrid Integrated Triplers Frequency Doublers and to 300 and 450 GHz

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High-power wide-band submillimeter-wave frequency sources have been developed. A frequency doubler to 300 GHz has delivered an output power of 5 mW with 3-dB-down bandwidth of more than 10 GHz. A frequency tripler to 450 GHz with an output power of 0.5 mW has also been tested. These multiplier output powers are highest values in the respective frequency regions up to date. The successful performances have been achieved by use of GaAs Schottky-barrier diodes and hybrid integrated circuits which are specially designed to obtain high output power.

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