44th International Conference on Infrared, Millimeter, and Terahertz Waves (IRMMW-THz) Proceedings 1-6 Sept. 2019, Paris, France, pag. 1-2

High-Power MM-Wave Frequency Multipliers

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https://doi.org/10.1109/IRMMW-THz.2019.8874296

Abstract

A novel approach has been developed on monolithic integration of Schottky diodes with CVD diamond substrate for improved thermal dissipation. This allowed development of mmwave frequency multipliers with unmatched power-handling capability while maintaining state-of-the-art conversion efficiency and bandwidth. This contribution highlights details of this development and summarizes experimental RF-results of high-power multipliers.