Abstracts

Planar Schottky diode frequency multiplier for molecular spectroscopy up to 1.3 THz

F. Maiwald, F. Lewen, B. Vowinkel, W. Jabs, D.G. Paveljev, M. Winnewisser and G. Winnewisser. "Planar Schottky diode frequency multiplier for molecular spectroscopy up to 1.3 THz." 1999 Microwave and Guided Wave Letters 9.5 (May 1999 [MGWL]): 198-200.

We present a novel and compact frequency multiplier design for broad-band spectroscopy up to 1.38 THz. The multiplier generates harmonics of a fundamental frequency between 110 and 240 GHz. The key element of the multiplier is a newly developed planar Schottky diode. Harmonic power generation is optimized with the aid of three tuning elements. The performance of the multiplier was checked spectroscopically.

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