Abstracts

A broadband 800 GHz Schottky balanced doubler

G. Chattopadhyay, E. Schlecht, J. Gill, S. Martin, A. Maestrini, D. Pukala, F. Maiwald and I. Mehdi. "A broadband 800 GHz Schottky balanced doubler." 2002 Microwave and Wireless Components Letters 12.4 (Apr. 2002 [MWCL]): 117-118.

A broadband planar Schottky balanced doubler at 800 GHz has been designed and built. The design utilizes two Schottky diodes in a balanced configuration on a 12 /spl mu/m thick gallium arsenide (GaAs) substrate as a supporting frame. This broadband doubler (designed for 735 GHz to 850 GHz) uses a split waveguide block and has a relatively simple, fast, and robust assembly procedure. The doubler achieved /spl ap/10% efficiency at 765 GHz, giving 1.1 mW of peak output power when pumped with about 9 mW of input power at room temperature.

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