Abstracts

A Wide-Band 760-GHz Planar Integrated Schottky Receiver

S.S. Gearhart, J. Hesler, W.L. Bishop, T.W. Crowe and G.M. Rebeiz. "A Wide-Band 760-GHz Planar Integrated Schottky Receiver." 1993 Microwave and Guided Wave Letters 3.7 (Jul. 1993 [MGWL]): 205-207.

A wide-band planar integrated heterodyne receiver has been developed for use at submillimeter-wave to far-infrared frequencies. The receiver consists of a log-periodic antenna integrated with a planar 0.8-μm GaAs Schottky diode. The monolithic receiver is placed on a silicon lens and has a measured room temperature double side-band conversion loss and noise temperature of 14.9 ± 1.0 dB and 8900 ± 500 K, respectively, at 761 GHz. These results represent the best performance to date for room temperature integrated receivers at this frequency.

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