

Abstracts

High Sensitivity Submillimeter Heterodyne Receiver

H.R. Fetterman, P.E. Tannenwald, B.J. Clifton, C.D. Parker and W.D. Fitzgerald. "High Sensitivity Submillimeter Heterodyne Receiver." 1978 MTT-S International Microwave Symposium Digest 78.1 (1978 [MWSYM]): 433-434.

Radiometric sensitivity measurements have been made on a quasi-optical receiver in the spectral range 170 μm to 1 mm. Using GaAs Schottky mixer diodes in a corner reflector configuration, a total system noise temperature of 9,700 K (DSB) has been obtained at 447 μm . This same quasi-optical mixer has also been used for harmonic generation of tunable radiation suitable for spectroscopic applications.

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