Abstracts

Cryogenic Millimeter-Wave Receiver Using Molecular Beam Epitaxy Diodes (1978 [MWSYM])

R.A. Linke, M.V. Schneider and A.Y. Cho. "Cryogenic Millimeter-Wave Receiver Using Molecular Beam Epitaxy Diodes (1978 [MWSYM])." 1978 MTT-S International Microwave Symposium Digest 78.1 (1978 [MWSYM]): 396-398.

A millimeter-wave receiver has been designed and built for the 60-90 GHz frequency band using GaAs mixer diodes prepared by molecular beam epitaxy (MBE). The devices are mounted in a reduced height waveguide mixer which is followed by a cooled parametric amplifier. At 18 K the receiver shows a total single sideband system temperature of 310 K at a frequency of 81 GHz. This is the lowest system temperature ever reported for a receiver built with a resistive diode mixer.

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