Abstracts

A 200-350-GHz Heterodyne Receiver

N.R. Erickson. "A 200-350-GHz Heterodyne Receiver." 1981 Transactions on Microwave Theory and Techniques 29.6 (Jun. 1981, Part I [T-MTT]): 557-561.

A low-noise heterodyne receiver for the 200-350-GHz region has been developed and used in astronomical observations. Two-room temperature mixers cover this range, with local oscillator (LO) power provided by frequency multiplied klystrons. A single crossed waveguide multiplier design covers the entire range, and is found to provide adequate output power by either doubling or tripling. Signal-LO diplexing is done with a quasioptical diplexer based on a Martin-Puplett interferometer. The best system sensitivities obtained with the two mixers have been 2100 K SSB at 242 GHz and 2900 K at 285 GHz.

❑ Return to main document.