

Abstracts

A Very Low-Noise Single-Sideband Receiver for 200-260 GHz

*N.R. Erickson. "A Very Low-Noise Single-Sideband Receiver for 200-260 GHz." 1985
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A cryogenic Schottky diode mixer receiver has been built for the 230-GHz region with true single-sideband operation and a receiver noise temperature as low as 330 K. Local oscillator power is provided by a frequency tripler, with LO injection and sideband filtering accomplished through quasi-optical interferometers. The image sideband is terminated in a cryogenic load with an effective temperature of 33 K. The IF bandwidth is 600 MHz with nearly flat noise, and the RF band is nearly flat over 50 GHz using backshort tuning of the mixer.

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