

Abstracts

A Prototype Quasi-Optical SIS Array Receiver

P.A. Stimson, R.J. Dengler, H.G. LeDuc and P.H. Siegel. "A Prototype Quasi-Optical SIS Array Receiver." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1337-1339.

We report measurements on a prototype SIS array receiver consisting of a ten-element dipole antenna array with half square micron niobium SIS junctions. The mixer array is a completely planar, integrated device mounted on the front surface of a quartz-filled parabolic reflector. The ten mixer elements are switched into a single IF filter-amplifier chain. Results at 230 GHz show receiver noise temperatures as low as 75K DSB, with 120K being a typical value.

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