

Abstracts

A New Mixer Design for 140-220 GHz (Short Papers)

A.R. Kerr, R.J. Mattauch and J.A. Grange. "A New Mixer Design for 140-220 GHz (Short Papers)." 1977 Transactions on Microwave Theory and Techniques 25.5 (May 1977 [T-MTT]): 399-401.

A new Schottky-diode mixer is described which has low noise and conversion loss in the 140-220-GHz band. At 170 GHz mixer noise temperatures of 1100-1300 K [Single sideboard (SSB)] have been measured, with 6.2-7.2-dB SSB conversion loss. The design should be usable up to -300 GHz with appropriate scaling. The mixer has been successfully used in airborne radiometers on the NASA Convair 990 and C-141 aircraft.

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