

Abstracts

A Continuous Comparison at 97 GHz Radiometer

C.R. Predmore, N.R. Erickson, G.R. Huguenin and P.F. Goldsmith. "A Continuous Comparison at 97 GHz Radiometer." 1985 Transactions on Microwave Theory and Techniques 33.1 (Jan. 1985 [T-MTT]): 44-51.

A continuous comparison radiometer has been implemented at 97 GHz using quasi-optical techniques for local oscillator (LO) injection and realization of a 90° hybrid. Cryogenically cooled Schottky-diode mixers and FET amplifiers give a double-sideband (DSB) system temperature of 250 K. The system is self-calibrating and optimized under computer control. The root-mean-square (rms) fluctuations due to the receiver are less than 0.025 K with a 1-s integration time.

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