

Abstracts

A Cryogenically Cooled Two-Channel Paramp Radiometer for 47 GHz

J. Edrich. "A Cryogenically Cooled Two-Channel Paramp Radiometer for 47 GHz." 1977 Transactions on Microwave Theory and Techniques 25.4 (Apr. 1977 [T-MTT] (Special Issue on Low-Noise Technology)): 280-285.

A field operational radiometer for 47 GHz with 18 K cooled degenerate paramps is described which has parallel channels for two ortholinear or circular polarizations. It exhibits an instantaneous RF bandwidth of 300 MHz and a tuning range up to 2 GHz. Its double-sideband system noise temperature of 100 K at midband and its minimum rms noise fluctuation of 0.16 K are several times lower than those of existing millimeter wave receivers.

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