

Abstracts

Cryogenic Parametric Amplifier Noise Performance at 4.2 K

W.J. Wilson, R.L. Dickman and G.G. Berry. "Cryogenic Parametric Amplifier Noise Performance at 4.2 K." 1980 Transactions on Microwave Theory and Techniques 28.3 (Mar. 1980 [T-MTT]): 186-190.

Results of an experiment in which a 4.5- -5.0-GHZ paramp was operated at 4.2 K are reported. The measured noise temperature at 4.2 K was 12 K. This is 6 K lower than the unit's noise temperature at its normal operating point of 18 K. It is concluded that varactor heating by the pump oscillators limited the improvement in noise performance. Prospects for further improvements in paramp noise temperature using better varactors are discussed.

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