

Computer-Aided Determination of Microwave Two-Port Noise Parameters

C. Giuseppe and M. Sannino. "Computer-Aided Determination of Microwave Two-Port Noise Parameters." 1978 Transactions on Microwave Theory and Techniques 26.9 (Sep. 1978 [T-MTT]): 639-642.

The least-squares fit of measured noise figures as a function of source admittance is an accurate and rapid method also convenient from the experimental point of view, to determine linear two-port noise parameters. However, to avoid the erroneous results often obtained by experimenters, this paper presents some criteria to be followed in choosing the proper source admittances. In order to apply the method to microwave two-ports, a relationship relating noise parameters in a linearized form is introduced. The analytical developments are in terms of effective input noise temperature of the two-port. Experimental results for a microwave transistor are also reported as a function of experimental redundancy.

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