Abstracts

A Vector Approach for Noise Parameter Fitting and Selection of Source Admittances

J.M. O'Callaghan and J.P. Mondal. "A Vector Approach for Noise Parameter Fitting and Selection of Source Admittances." 1991 Transactions on Microwave Theory and Techniques 39.8 (Aug. 1991 [T-MTT]): 1376-1382.

Simple vector concepts can be used to determine noise parameters from measured data. The use of such concepts leads to a simplification in the least-square fitting algorithm, complete determination of the admittance loci that produce ill conditioning, and simple criteria for the selection of source admittances that minimize the sensitivity of the noise parameters to experimental error. The sensitivity of the noise parameters to small perturbations in the reflection coefficients is compared for a group of source admittances selected with the techniques described here and a group of admittances presented in a previous work. The results show that a great reduction in the error of the noise parameters can be achieved by properly selecting the source admittances.

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