Abstracts

Noise Power Sensitivities and Noise Figure Minimization of Two-Ports with Any Internal Topology (Short Papers)

J.A. Dobrowolski. "Noise Power Sensitivities and Noise Figure Minimization of Two-Ports with Any Internal Topology (Short Papers)." 1991 Transactions on Microwave Theory and Techniques 39.1 (Jan. 1991 [T-MTT]): 136-140.

A theoretical foundation is presented for the efficient CAD-oriented computation of first-order noise power sensitivities of networks with respect to network parameters. Application to the CAD of low-noise circuits with minimum noise figure using efficient gradient optimization methods is envisaged. The approach is applicable to circuits with any internal topology composed of any number of passive linear multiports and active linear two-ports. It is based on the scattering matrix description for circuit elements and wave representation for noise.

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