Abstracts

Optimum noise measure configurations for transistor negative resistance amplifiers

P. Gardner and D.K. Paul. "Optimum noise measure configurations for transistor negative resistance amplifiers." 1997 Transactions on Microwave Theory and Techniques 45.5 (May 1997, Part I [T-MTT]): 580-586.

A new method, using the noise matrix approach, has been developed for determining the optimum reactive terminations for a transistor employed as a low-noise negative-resistance element in a reflection-mode amplifier. This new method corroborates the less efficient graphical method the authors reported earlier. It is established theoretically and demonstrated numerically that the optimum noise measure of a transistor used in a reflection-mode amplifier is independent of the choice of active terminal and is identical to the optimum noise measure of the same transistor when used in a conventional transmission-mode amplifier.

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