Abstracts

Measurement of the Noise in a Linear Two-Port Device

G.A. Deschamps, F.R. Ore and J.J. Sweeney. "Measurement of the Noise in a Linear Two-Port Device." 1970 G-MTT International Microwave Symposium Digest of Technical Papers 70.1 (1970 [MWSYM]): 179-182.

It is well known that the noise factor of a linear two-port depends on the impedance (or reflectance) of the source connected to it. This is easily understood if the noise sources inside the device are replaced by equivalent amplitude sources, one at each port. These sources produce outward traveling waves which are, in general, partially correlated. Thus if the wave at port 1 is reflected by the source mismatch it will interfere with the wave at 2 in a manner that depends on the source reflectance W.

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