Abstracts

Specifications for a Linear Network Simultaneously Noise and Available-Power Matched

L. Boglione, R.D. Pollard, V. Postoyalko and T. Alam. "Specifications for a Linear Network Simultaneously Noise and Available-Power Matched." 1996 Microwave and Guided Wave Letters 6.11 (Nov. 1996 [MGWL]): 407-409.

This letter addresses the problem of designing a linear lossy input matching network for low-noise amplifiers so that the source impedance can deliver its available power and correspond to the minimum noise figure of the driven stages. The differences between lossless and lossy networks are highlighted because matching circuits are usually considered to be lossless when designing an amplifier. After stating the assumptions, a solution to the problem of the minimum number of elements fulfilling the requirements is developed. The result explains why the standard distributed approach often fails to cope with minimum noise specifications when practical elements are considered.

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