Abstracts

Optimization of noise performance for various topologies of planar microwave active filters using noise wave techniques

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In this paper, two types of microwave active filters are studied. First we show how, using a noise wave formalism, the noise factor of three topologies of active recursive filters can be effectively minimized by using appropriate unbalanced power dividers/combiners and an amplifier. A comparison between the different topologies is given. Simulations and practical results are presented and validate our approach. In a second part, the noise wave formalism is applied to /spl lambda//2 microstrip active filters. We show how the appropriate choice of coupling between lines and resonators can achieve low-noise filters. Simulations and practical results are also presented.

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