Abstracts

Analysis and optimization of noise and gain performances for various topologies of microwave ring resonator planar active filters

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This article presents multipole ring resonator planar active filters. We show how the noise factor of this category of filters can be analytically derived and effectively minimized by using appropriate unbalanced power couplers and amplifiers. Topologies of devices achieving a minimum noise factor with a maximum gain are presented. We validate our approach with simulated examples for each topology.

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