Abstracts

Back-to-back microstrip open-loop resonator filters with aperture couplings

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The rapid growth of wireless and mobile communications has stimulated the development of multilayer filter technology. In this paper, a new class of back-to-back microstrip open-loop resonator filters is introduced. The new filter configuration consists of two arrays of microstrip open-loop resonators that can be coupled through apertures on the common ground plane. Depending on the arrangement of the apertures, different filtering characteristics can easily be realized. Electromagnetic modeling of the aperture couplings is presented. Two experimental filters of this type with Chebyshev and elliptic function response respectively, are described together with experimental and theoretical results.

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