Abstracts

Spectral Approach to the Synthesis of Bandstop Filters

A.A. Kirilenko, L.A. Rud and S.L. Senkevich. "Spectral Approach to the Synthesis of Bandstop Filters." 1994 Transactions on Microwave Theory and Techniques 42.7 (Jul. 1994, Part II [T-MTT] (Special Issue on Filters and Multiplexers)): 1387-1392.

A nontraditional approach to the synthesis of bandstop filters (BSF) based on the analysis of the spectrum of complex eigenfrequencies of multimode resonators forming a filter is described. Two types of BSF resonators, which are formed by cross-section enlargements of a finite length of a rectangular waveguide in E- or H-plane, are considered. It was shown that a BSF of the first type had no spurious stopbands and practically did not introduce a loss in the passband. The high accuracy of the filter design is confirmed by the experimental data.

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