

Computer-Aided Design of Evanescent-Mode Waveguide Filter with Nontouching E-Plane Fins

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This paper presents a computer-aided design algorithm for the analysis and design of an evanescent-mode bandpass filter with non-touching E-plane fins. The theoretical analysis is based on the generalized scattering matrix technique in conjunction with the spectral-domain approach and mode-matching method. The technique used in this paper takes into account the dominant as well as the higher order effects. The measured filter responses in the Ka-band are in good agreement with those obtained by this analysis.

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