Abstracts

Waveguide Sandwich Filters

J.D. Rhodes. "Waveguide Sandwich Filters." 1974 Transactions on Microwave Theory and Techniques 22.4 (Apr. 1974 [T-MTT]): 394-399.

A new class of waveguide filters is introduced, constructed from several thin plates sandwiched together. The combination of alternate plates having large and small rectangular apertures leads to a propagating structure which possesses a bandstop response and prescribed characteristic impedance. This basic element may be used as a simple compact bandstop filter, particularly where the main passband and stopband are well separated, such as in harmonic rejection. For filters with many stopbands, combinations of several waveguide sandwich filter elements are used to provide the main passband and the required attenuation characteristics in the prescribed stopbands. Although the filter is ideally suited for bandstop filtering due to its small size, low cost, low loss, and high power handling capability, additional applications to bandpass filtering and dispersive delay line operation are also cited.

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