Abstracts

Gap Spacing for End-Coupled and Side-Coupled Strip-Line Filters (Correspondence)

J.K. Richardson. "Gap Spacing for End-Coupled and Side-Coupled Strip-Line Filters (Correspondence)." 1967 Transactions on Microwave Theory and Techniques 15.6 (Jun. 1967 [T-MTT]): 380-382.

Two of the simplest strip-line configurations for bandpass filters are those which utilize end coupling (Fig. 1) and side coupling (Fig. 2). For the special case of a symmetric strip line with center conductor of negligible thickness (Fig. 3), it is possible to establish expressions which explicitly relate gap spacing S to normalized bandwidth w. Generally it is found that the greater the gap width, the less important are the tolerance considerations; alternatively, a broader bandwidth may be achieved for a given tolerance. The purpose of this correspondence is to establish a criterion that will enable a designer to select the filter with the greater coupling gap for given values of ground plane spacing D, midband wavelength lambda/sub 0/, and normalized bandwidth.

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