

## Performance of a planar filter using a 0/spl deg/ feed structure

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*Chih-Ming Tsai, Sheng-Yuan Lee and Chin-Chuan Tsai. "Performance of a planar filter using a 0/spl deg/ feed structure." 2002 Transactions on Microwave Theory and Techniques 50.10 (Oct. 2002 [T-MTT]): 2362-2367.*

The advantage of using a 0/spl deg/ feed structure in filter design is that two extra transmission zeros are created in the stopband while the passband response remains unchanged. This feed structure is analyzed by using transmission matrices. A new lumped-circuit model for a coupled resonator filter is then proposed to take into account the effects of this feed structure. Finally, the feed structure is applied to the design of a cross-coupled filter. All the theoretical analysis and design procedures have been successfully verified by experiment results.

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