

## A folded coupled-line structure and its application to filter and diplexer design

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*Chih-Ming Tsai, Sheng-Yuan Lee, Chia-Cheng Chuang and Chin-Chuan Tsai. "A folded coupled-line structure and its application to filter and diplexer design." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 1927-1930 vol.3.*

In this paper, a folded coupled-line structure which can create a transmission zero is studied. A rough estimate for the frequency of this transmission zero is also given. A compact second-order filter with the folded coupled-line structures and a skew-symmetric (zero-degree) feed structure is designed. The improved shape factor and out-of-band response of this new filter are compared with those of a conventional second-order filter. Finally, this new filter topology is applied to the design of a diplexer.

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