Abstracts

Meander-Folded Coupled Lines

S. Rehnmark. "Meander-Folded Coupled Lines." 1978 Transactions on Microwave Theory and Techniques 26.4 (Apr. 1978 [T-MTT]): 225-230.

The quarter wave meander-folded coupler is a compact device useful for frequencies up to a few gigahertz. The folding is shown to shorten the electric length of the coupler and a theory is presented for the calculation of this shortening effect. The theory shows that the even-mode circuit is shortened to a higher extent than the odd-mode circuit which in stripline causes a degradation of performance. A conformal mapping technique is presented for determining the characteristic impedances of some stripline structures necessary for the theory. The theory is verified by experimental meander-folded stripline couplers. It is also experimentally shown that the meander-folded microstsip coupler can be designed to equalize the even- and the odd-mode lengths.

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