Abstracts

Perturbation Analysis and Modeling of Curved Microstrip Bends

A. Weisshaar and V.K. Tripathi. "Perturbation Analysis and Modeling of Curved Microstrip Bends." 1990 Transactions on Microwave Theory and Techniques 38.10 (Oct. 1990 [T-MTT]): 1449-1454.

The frequency-dependent transmission properties of the curved microstrip bend are derived by utilizing a second-order perturbation analysis of the equivalent modified curved waveguide model and a mode-matching method which includes the higher order modes. The scattering parameters of typical curved microstrip bends in (M)MIC's are computed and compared with those of the right-angle and chamfered right-angle microstrip bends. The calculations for the scattering parameters of the curved microstrip bends exhibit good convergence behavior with increasing number of higher order modes considered. The results are consistent for large curvatures and bends with small angle.

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