

Abstracts

Effect of conductor backing on the line-to-line coupling between parallel coplanar lines

K.-K.M. Cheng. "Effect of conductor backing on the line-to-line coupling between parallel coplanar lines." 1997 *Transactions on Microwave Theory and Techniques* 45.7 (Jul. 1997 [T-MTT]): 1132-1134.

A good estimate of the coupling effect between parallel coplanar waveguide (CPW) lines is important, especially for monolithic microwave integrated circuit (MMIC) applications where unnecessary crosstalk between conductors could be a serious problem. This paper shows how these coupling parameters may be analytically obtained in the presence of the back-face metallization. Closed-form formulas are developed for evaluating the quasi-TEM characteristic parameters based upon the conformal-mapping method (CMM). Very good agreement is observed between the values produced by these formulas and by a spectral-domain method (SDM).

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