

Abstracts

The Equivalent Circuit of a Microstrip Crossover in a Dielectric Substrate

S. Papatheodorou, R.F. Harrington and J.R. Mautz. "The Equivalent Circuit of a Microstrip Crossover in a Dielectric Substrate." 1990 *Transactions on Microwave Theory and Techniques* 38.2 (Feb. 1990 [T-MTT]): 135-140.

A quasi-static analysis is carried out to examine the capacitive coupling between two nonintersecting orthogonal microstrip lines above a ground plane and in a dielectric substrate. The charge density along the width of each strip is described using a prescribed charge distribution. A pair of coupled integral equations is derived and solved via the method of moments to obtain the excess charge densities. The lumped excess capacitances are computed and compared to the ones obtained using wire lines with radii equal to the equivalent radii of the strips.

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