Abstracts

Analysis of a Microstrip Crossover Embedded in a Multilayered Anisotropic and Lossy Media

J. Martel, R.R. Boix and M. Horno. "Analysis of a Microstrip Crossover Embedded in a Multilayered Anisotropic and Lossy Media." 1994 Transactions on Microwave Theory and Techniques 42.3 (Mar. 1994 [T-MTT]): 424-432.

The equivalent circuit and the scattering parameters of the orthogonal microstrip crossover discontinuity are determined by assuming that the conducting strips are embedded in a multilayered substrate which may contain both anisotropic dielectrics and materials with a nonnegligible conductivity. The equivalent circuit of the crossover is obtained in terms of the complex excess charge densities on the strips. These excess charge densities are computed by means of the Galerkin method in the spectral domain. Comparison is carried out with previously existing results for microstrip crossovers on lossless isotropic substrates and original results are presented for crossovers on anisotropic and lossy substrates.

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