Abstracts

Fast full-wave analysis of multistrip transmission lines based on MPIE and complex image theory

The mixed-potential electric-field integral equation is used in conjunction with the Galerkin's method and complex image theory for analyzing a transmission line with multiple strips embedded in different layers of a multilayered uniaxially anisotropic dielectric substrate. The two-dimensional Green's functions for the scalar and vector potentials are analytically obtained in the space domain due to the approximation of its spectral-domain version with complex images, thus avoiding lengthy numerical evaluations. Double integrals involved in the computation of Galerkin's matrix entries are quasi-analytically carried out for the chosen basis functions, which are well suited to the problem.

❏ Return to main document.