Abstracts

Fullwave Description of Propagation and Losses in Quasiplanar Transmission Lines by Quasi-Analytical Solution

J.-W. Tao, G. Angenieux and B. Flechet. "Fullwave Description of Propagation and Losses in Quasiplanar Transmission Lines by Quasi-Analytical Solution." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 935-938.

In this paper, we present a fullwave description of propagation and losses for some quasiplanar transmission lines by using a quasi-analytical solution. This latter is derived from a recently proposed modified transverse resonance method (MTRM), in which an analytical preprocessing has been introduced. The quasistatic contribution is obtained by an entirely analytical solution, so the resultant system of linear equations is very efficient. Furthermore, the resistive boundary conditions as well as the complex substrate permittivity are taken into account in an intrinsic manner, leading to an accurate determination of dielectric and conductor losses in lossy transmission lines. Theoretical and experimental results will be presented respectively for a lossless CPW and a lossy microstrip line.

❑ Return to main document.