Abstracts

Numerically Efficient Spectral Domain Approach to the Quasi-TEM Analysis of Supported Coplanar Waveguide Structures

K.K.M. Cheng and I.D. Robertson. "Numerically Efficient Spectral Domain Approach to the Quasi-TEM Analysis of Supported Coplanar Waveguide Structures." 1994 Transactions on Microwave Theory and Techniques 42.10 (Oct. 1994 [T-MTT]): 1958-1965.

A numerically improved Quasi-TEM analysis of supported coplanar technique for the waveguides is presented. The spectral domain method is combined with a special set of basis functions, to facilitate an accurate and efficient solution. The resulting integrals are evaluated using closed-form expressions instead of numerical integration scheme which leads to short CPU time. In this study, numerical results for the characteristic impedances of coplanar waveguides are presented. Comparisons are also made between the computed results and available ones. The charge density distributions on the center signal strip as well as on the ground plane are examined.

❑ Return to main document.