

Abstracts

Corner Function Analysis of Microstrip Transmission Lines

T.K. Seshadri, S. Mahapatra and K. Rajaiah. "Corner Function Analysis of Microstrip Transmission Lines." 1980 Transactions on Microwave Theory and Techniques 28.4 (Apr. 1980 [T-MTT]): 376-380.

A new method of analysis of microstrip transmission lines using corner functions (eigenfunctions) is presented. Assuming the TEM mode propagation for the shielded microstrip line structure, solutions are set up in a series of corner functions, which isolates the singularity at the edge of the strip. The boundary conditions are satisfied by using a method of successive integration of boundary errors. Numerical results are obtained for the charge distribution from which the microstrip line characteristic impedance is determined. Excellent agreement with published theoretical results and experimental data is obtained. The numerical results clearly bring out the power of the method.

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