Abstracts

Analysis of Microstrip Discontinuities Using the Spatial Network Method with Absorbing Boundary Conditions (Short Papers)

In this paper it is shown that spatial network method (SNM) can be formally derived as a finite differencing scheme, which ensures that the necessary stability and convergence conditions are met. For the first time, Mur and Higdon second-order absorbing boundary conditions (ABC's) have been used in conjunction with SNM. It has been found that the Higdon second-order ABC's perform better than the Mur algorithm for guided wave problems with inhomogeneous substrates. Finally, it is shown that SNM can successfully be employed for the analysis of planar and three-dimensional (3-D) microstrip discontinuities in open or shielded environments.

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