Abstracts

A Boundary Condition to Absorb Both Propagating and Evanescent Waves in a Finite-Difference Time-Domain Simulation

A boundary condition that absorbs both propagating and evanescent waves in a finite-difference time-domain (FDTD) simulation is presented. A computationally efficient method of determining the values of the boundary condition input parameters is described. To illustrate the effectiveness of this boundary condition, it is used to truncate the computational domain of two FDTD simulations, namely a uniform microstrip line and a microstrip line with a gap discontinuity. In both cases, the results are found to be more accurate than those obtained with the conventional second-order Mur absorbing boundary condition.

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