Abstracts

Comparison and Evaluation of Boundary Conditions for the Absorption of Guided Waves in an FDTD Simulation

V. Betz and R. Mittra. "Comparison and Evaluation of Boundary Conditions for the Absorption of Guided Waves in an FDTD Simulation." 1992 Microwave and Guided Wave Letters 2.12 (Dec. 1992 [MGWL]): 499-501.

Several absorbing boundary conditions suitable for terminating the finite-difference time-domain (FDTD) simulation of microstrip structures are compared via numerical experiments. Both a super-absorbing boundary and a modified form of Litva's dispersive boundary condition are found to produce significantly lower reflection than the traditional first-order Mur boundary. The sensitivity of these boundary conditions to the choice of the input parameters, particularly the effective dielectric constant epsilon/sub eff/, is investigated, and optimal choices of these parameters are given.

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