Abstracts

Analysis of Multilayered Transmission Lines by Hybrid Wavelet Expansion and Boundary Element Method

The capacitance and inductance matrices of multilayered multiconductor transmission line (MMTL) systems are calculated by using the wavelet expansion method in conjunction with the boundary element method (BEM). The unknown total charge is expanded in terms of orthogonal wavelets in $L^2([0, 1])$. The BEM converts the 2-D problem into a 1-D problem, and provides a versatile and accurate treatment of curved interfaces. A sparse matrix equation is developed from the set of Integral equations. Our numerical results are compared with previously published data with good agreement.

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