

Spectral Domain Analysis of Microstrip Floating Line Structures by Wavelet Expansion Method

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A spectral domain analysis of microstrip floating line structures by wavelet expansion method is presented. The surface integral equation is converted into a sparse matrix equation by using the Galerkin's method, with the integral kernel and the unknown current expanded in terms of orthogonal wavelets. Limitations inherited in the traditional orthogonal basis systems are released: The problem-dependent normal modes have been replaced by the problem-independent wavelets, preserving the orthogonality. The trade-off between orthogonality and continuity is well balanced by the orthogonal wavelets. Numerical results are compared with previous published data with good agreement.

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