Abstracts

Frequency-Domain Analysis of Coupled Nonuniform Transmission Lines Using Chebyshev Pseudo-Spatial Techniques

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The analysis of nonuniform cross-section, lossy and coupled transmission lines is frequently necessary in the design and simulation of high speed microelectronics systems. This paper presents a method of performing such simulations on lossy lines of arbitrary cross section, under the quasi-TEM assumption. The technique incorporates a Chebyshev expansion in the frequency domain, and is one of the most suitable methods presently in existence for incorporation into computer aided design tools.

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