Abstracts

Simulation of high-speed interconnects in a multilayered medium in the presence of incident field

I. Erdin, R. Khazaka and M.S. Nakhla. "Simulation of high-speed interconnects in a multilayered medium in the presence of incident field." 1998 Transactions on Microwave Theory and Techniques 46.12 (Dec. 1998, Part II [T-MTT] (1998 Symposium Issue)): 2251-2257.

Simulation of high-speed circuits and interconnects in the presence of incident electromagnetic interference is becoming an important step in the design cycle. An accurate and efficient method for the analysis of incident field coupling to traces in inhomogeneous medium is described. The method is based on the application of the physical optics technique. An interconnect circuit simulation stamp is derived. This stamp provides an easy link to current simulators and to recently developed model reduction techniques. In addition to accounting for the inhomogeneity of the medium, this method provides significant computational efficiency improvement over conventional approaches.

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