Abstracts

Coupling Maxwell's Equation Time-Domain Solution with Monte-Carlo Technique to Simulate Ultrafast Optically Controlled Switches

K.M. Connolly, S.M. El-Ghazaly, R.O. Grondin and R.P. Joshi. "Coupling Maxwell's Equation Time-Domain Solution with Monte-Carlo Technique to Simulate Ultrafast Optically Controlled Switches." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 295-298.

In this paper, we discuss how a combination of direct finite-difference time domain solutions of Maxwell's equations and Monte-Carlo models of photocarrier transport can be used to eliminate assumptions commonly made in developing equivalent circuit models for transmission lines. We then apply this technique to an electro-optic switch with subpicosecond risetimes.

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