Abstracts

Fast Method for Frequency and Time Domain Simulation of High-Speed VLSI Interconnects

R. Sanaie, E. Chiprout, M.S. Nakhla and Q.J. Zhang. "Fast Method for Frequency and Time Domain Simulation of High-Speed VLSI Interconnects." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1417-1420.

This paper presents a fast method for frequency and time domain analysis of large lumped and distributed networks. It is based on multi-point moment-matching. The proposed method requires the solution of the network equations at relatively small number of frequency points (typically two to eight points) which makes it 20-100 times faster compared to conventional simulation techniques. The method is suitable for analysis of VLSI interconnects modeled by mutually coupled lossy transmission lines.

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