Abstracts

Wave Spreading Evaluation of Interconnect Systems

H. Liao and W.W.-M. Dai. "Wave Spreading Evaluation of Interconnect Systems." 1995 Transactions on Microwave Theory and Techniques 43.10 (Oct. 1995 [T-MTT]): 2486-2491.

This paper derives general multiport interconnect constraints and presents a new approach, wave spreading evaluation (WSE), which uses S-parameter based network techniques to analyze coupled, multiconductor interconnect systems for high speed analog and digital integrated circuits. WSE is based on the spreading process of voltage waves with initial spreading waves created by the sources. The spreading process is independent of input sources, and every step of wave spreading meets the constrains of KCL and KVL. The continual spreading of voltage waves will create accurate results. Since the spreading voltage waves is the process of energy attenuation, the WSE method is always convergent for passive networks.

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