

Abstracts

A Combination of FD-TD and Prony's Methods for Analyzing Microwave Integrated Circuits (Dec. 1991 [T-MTT])

W.L. Ko and R. Mittra. "A Combination of FD-TD and Prony's Methods for Analyzing Microwave Integrated Circuits (Dec. 1991 [T-MTT])." 1991 Transactions on Microwave Theory and Techniques 39.12 (Dec. 1991 [T-MTT] (1991 Symposium Issue)): 2176-2181.

It is demonstrated in this paper that in applying the FD-TD technique to analyze microwave integrated circuits, the long FD-TD time record required for generating accurate frequency domain scattering parameters can be extrapolated from a relatively short FD-TD time record by using Prony's method. As shown by comparison with the direct FD-TD generated results, the new approach using the combination of FD-TD and Prony's methods achieves the same type of accuracy with a time record computed over a much shorter time.

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