Abstracts

Analysis Method for Transient Fields in Planar Structures by Marching-on-in-Time Integral Equation Technique

N. Georgieva and E. Yamashita. "Analysis Method for Transient Fields in Planar Structures by Marching-on-in-Time Integral Equation Technique." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 1051-1054.

A new numerical algorithm for the analysis of transient electromagnetic fields in planar structures is proposed based on the magnetic field integral equation (MFIE) and marching-on-in-time approach. This algorithm solves the problem of radiation boundary conditions in a natural way unlike the FDTD method which needs an approximated radiation boundary condition imposed at outer boundaries of the structure. The algorithm is applicable to multilayered planar structures and is competitive to the FDTD method especially in the case of open and radiating problems. The MFIE is applied in combination with boundary element approach and point matching technique.

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