Abstracts

Fast electromagnetic analysis of dense shielded integrated circuits using the adaptive integral method (AIM)

V.I. Okhmatovski and A.C. Cangellaris. "Fast electromagnetic analysis of dense shielded integrated circuits using the adaptive integral method (AIM)." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1929-1932 vol.3.

The adaptive integral method (AIM) is used to accelerate the electromagnetic solution of dense integrated circuits inside metallic enclosures of rectangular cross section. The computational complexity and memory requirements for the proposed AIM-based electromagnetic solver scale as O(N log N) and O(N), respectively, where N is the number of unknowns in the discrete approximation of the governing integral equation. The accuracy and efficiency of the solver is demonstrated through its application to the modeling of a shielded patch array used for spatial power combining.

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