Abstracts

Three-Dimensional Finite-Difference Method for the Analysis of Microwave-Device Embedding

A. Christ and H.L. Hartnagel. "Three-Dimensional Finite-Difference Method for the Analysis of Microwave-Device Embedding." 1987 Transactions on Microwave Theory and Techniques 35.8 (Aug. 1987 [T-MTT]): 688-696.

The embedding of microwave devices is treated by applying the finite-difference method to three-dimensional shielded structures. A program package was developed to evaluate electromagnetic fields inside arbitrary transmission-line connecting structures and to compute the scattering matrix. The air bridge, the transition through a wall, and the bond wire are examined as interconnecting structures. Detailed results are given and discussed regarding the fundamental behavior of embedding.

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