Abstracts

Hybrid analysis of three-dimensional structures by the method of lines using novel nonequidistant discretization

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Many microwave structures contain various elements with very big difference in their size. Exact modeling of such structures with equidistant discretization requires considerable numerical effort and large memory capacity. Alternative formulas for nonequidistant discretization are proposed. New difference operators for nonequidistant discretization are given. The accuracy of these operators is compared with the previous ones used with the Method of Lines. Numerical results of two microwave filters are presented to check the accuracy of the new algorithm.

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