

Abstracts

Accuracy limitations of perfectly matched layers in 3D finite-difference frequency-domain method

T. Tischler and W. Heinrich. "Accuracy limitations of perfectly matched layers in 3D finite-difference frequency-domain method." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 1885-1888 vol.3.

The perfectly matched layer (PML) boundary condition is employed in conjunction with the 3D finite-difference frequency-domain method (FDFD) for S parameter calculation of microwave devices. We find a residual reflection error, which is related only to discretization at the PML interface. The paper presents a systematic investigation of this parasitic effect and its origin.

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