Abstracts

3D hybrid finite-difference method for lossy structures based on quasi-static field solutions

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A new 3D hybrid finite-difference (FD) method is presented that accounts for finite conductivity. The field gradients inside conductors and structural details are treated combining quasi-static field solutions with the full-wave analysis. In the quasi-static regime, the magnetic field computations and the corresponding source formulation needs special consideration The hybrid method reduces computational efforts while maintaining accuracy of the conventional FD scheme. The new approach is verified for a MMIC coplanar short stub and airbridges.

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