Abstracts

Locally conformed subgrid FD-FD technique for the analysis of 3D waveguide structures with curved metallic objects

R. Lotz, J. Ritter and F. Arndt. "Locally conformed subgrid FD-FD technique for the analysis of 3D waveguide structures with curved metallic objects." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1277-1280 vol.3.

A conformed subgrid finite-difference frequency domain (CS FD-FD) algorithm is presented. The method combines the advantages of both a locally conformed grid for modeling curved perfectly conducting bodies and a direct orthogonalization subgrid technique for regions of high field intensity. This reduces significantly CPU time and storage requirements. The usefulness of the method is demonstrated for a metallic post structure in a rectangular waveguide and a dielectric resonator filter including coaxial coupling elements. The method is verified by reference values.

❑ Return to main document.