Abstracts

3D FDTD Simulation of Superconductor Coplanar Waveguides

S. Xiao and R. Vahldieck. "3D FDTD Simulation of Superconductor Coplanar Waveguides." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 349-352.

3D superconductor coplanar waveguide structures are simulated using the 3D FDTD method with graded mesh. Using the two-fluid model, Maxwell's equations are expressed in the time domain and discretized in time and all three space directions. By using a combination of the forward and central finite difference scheme in conjunction with a graded mesh layout of second order accuracy, 3D superconductor CPW discontinuities are calculated. Tensor properties of the substrate are taken into account as well as thin buffer layers between the superconductor and the supporting substrate.

❑ Return to main document.