Abstracts

Analysis of Overmoded Waveguides Using the Finite-Difference Time Domain Method

D.H. Roper and J.M. Baird. "Analysis of Overmoded Waveguides Using the Finite-Difference Time Domain Method." 1992 MTT-S International Microwave Symposium Digest 92.1 (1992 Vol. I [MWSYM]): 401-404.

This paper presents techniques developed for analyzing scattering and coupling in overmoded waveguides using the Finite-Difference Time Domain method. Sources and absorbing boundary conditions for waveguide modes are examined. The stair-step approximation to round surfaces is considered, and a technique is described for finding the effective radius of a cylindrical model. A numerical example of scattering from a step diameter transition in circular waveguides is presented and compared to the analytic solution.

❑ Return to main document.