Abstracts

Scattering by a Dielectric Obstacle in a Rectangular Waveguide

A method for the computation of S-parameters associated with a rectangular waveguide with a rectangular or cylindrical obstacle of arbitrary complex scalar permittivity is presented. The method uses modal analysis and integral relationships to connect appropriate components of the field. In this way, convergence is achieved faster than by point-matching techniques. Our method is well adapted to resonance problems, as illustrated by comparison with both theoretical and experimental results.

❑ Return to main document.