Abstracts

Analysis of Rectangular Waveguide Junctions by the Method of Lines

A novel discretization on two crossed line systems is introduced in the method of lines to analyze junctions in rectangular waveguides. This discretization is one-dimensional and replaces the two-dimensional discretization otherwise necessary for such structures. Hence the matrices encountered are small compared with other approaches. Equivalent circuits for the right-angle E-plane corner and scattering parameters for the asymmetric T-junction are presented, which agree very well with literature.

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