

Abstracts

Scattering and Transmission Matrix Representations of Multiguide Junctions

F. Dai. "Scattering and Transmission Matrix Representations of Multiguide Junctions." 1992 Transactions on Microwave Theory and Techniques 40.7 (Jul. 1992 [T-MTT] (Special Issue on Process-Oriented Microwave CAD and Modeling)): 1538-1544.

The scattering and transmission matrix representations of the mode-matching technique are generalized for multiguide junctions with arbitrarily shaped coupling apertures. A comparison between both representations is given with respect to the CPU time. The relative convergence phenomenon arising in cascaded discontinuities of multiguide junctions is investigated. A numerical criterion for choosing the correct mode ratio among the guides is presented. Also studied is the application to a kind of multiguide junction between a circular waveguide and a coaxial waveguide with hollow inner.

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