Abstracts

A Moment Solution for Waveguide Junction Problems

A moment procedure for solving waveguide junction problems is given using the generalized network formulation for aperture problems. As an illustration, the procedure is applied to a transverse planar junction between two uniform cylindrical waveguides. The generalized admittance network representation of the junction is first obtained. Its scattering matrix representation is then deduced from the former representation. A discussion shows that the conservation of complex power technique, which handles the same class of junctions, is, a specialization of the moment procedure.

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