Abstracts

Multiple Waveguide Discontinuity Modelling with Restricted Mode Interaction (Short Papers)

A general modal analysis solution is presented for the scattering from multiple discontinuities in waveguides. As in a previous formulation, a recurrence procedure is used to derive the global scattering matrices from the coupled sets of truncated linear equations, which are obtained by expanding the corresponding fields in modal form and imposing the boundary conditions at each junction. In the present analysis, the higher order modes are included in the truncations at each discontinuity plane, but only those modes that effectively interact between the discontinuities are retained. Numericat results are given for a thick iris and multiple-step transformers in circular waveguides.

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