

Abstracts

Scattering at Rectangular-to-Rectangular Waveguide Junctions (Short Papers)

R. Safavi-Naini and R.H. MacPhie. "Scattering at Rectangular-to-Rectangular Waveguide Junctions (Short Papers)." 1982 Transactions on Microwave Theory and Techniques 30.11 (Nov. 1982 [T-MTT]): 2060-2063.

This short paper presents formally exact solutions with convergent numerical results to the problems of scattering from a rectangular-to-rectangular waveguide junction and from a thick diaphragm with rectangular aperture in rectangular waveguide. The method uses normal mode expansions of the waveguide fields and the principle of conservation of complex power. A variety of configurations are considered and numerical convergence is confirmed by comparison with experiment.

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