

Abstracts

On the Problem of Applying Mode-Matching Techniques in Analyzing Conical Waveguide Discontinuities

G.L. James. "On the Problem of Applying Mode-Matching Techniques in Analyzing Conical Waveguide Discontinuities." 1983 *Transactions on Microwave Theory and Techniques* 31.9 (Sep. 1983, Part I [T-MTT]): 718-723.

Mode-matching techniques in the past have been successfully used to analyze rectangular and circular waveguide problems involving transverse discontinuities. The extension of this method to conical waveguide discontinuities is shown to exhibit difficulties of convergence caused by the behavior of the cutoff conical modes. To illustrate the problem, the junction of a smooth-walled cylindrical waveguide with a corrugated conical horn is discussed in some detail.

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