

研究简报

## 一种判断波导接头模匹配解相对收敛程度的方法

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### 摘要

本文从模式耦合的概念出发,详细探讨了波导接头模匹配解的物理意义,并根据Auda和Harrington(1983)的结论导出了一个重要的关系式。该式可用于判断波导接头参数模匹配解的相对收敛程度和确定接头两侧波导模式数的正确比例,从而使为修正而必须进行的两次计算的工作量与一次计算的工作量相当。本文通过两例不同脊高的脊波导接头的模匹配解的具体过程,说明该方法具有较高的实用性和广阔的应用范围。

**关键词** [Based on the concept of mode coupling, the physical meaning of re-lative convergence of the mode matching solution for waveguide junctions of planary type is discussed in detail. An important ormula is derived according to Auda and Harrington s conclusion \(1933\), which can be used as a judgement on the relative convergence of mode matching solution for the junctions. Some computation samples on ridged waveguide junction problems with different ridge heights are given to show that the method is practicable and of wide use.](#)

分类号

## A METHOD FOR JUDGING RELATIVE CONVERGENCE OF MODE MATCHING SOLUTIONS OF WAVEGUIDE JUNCTIONS

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### Abstract

波导接头; 矩量法; 相对收敛性

**Key words** [Waveguide junction](#) [Moment method](#) [Relative converence](#)

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