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阻抗条缩减边缘散射优化模型研究

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STUDY OF OPTIMAL MODEL OF REDUCING IMPEDANCE STRIP EDGE SCATTERING

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摘要	参考文献	相关文章

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摘要 首先推导出二维阻抗条带的散射积分方程,然后用矩量法求解其表面电流密度,进而求其散射分布。通过电磁建模,分析了条带不同阻抗分布下的电磁散射特性,从而得到对边缘散射缩减很大的阻抗分布函数,实现对阻抗渐变材料分布的优化,对雷达吸波材料的设计有重要的指导意义。

关键词： 雷达散射截面　雷达吸波材料　阻抗条带　矩量法

Abstract：Firstly the scattering integral equation for a two dimensional impedance strip is presented, then surface current density is solved via the method of moments, and lastly its scattering pattern is predicted. By this method, the characteristic of electromagnetic scattering of different impedance distribution strips is analysed; the impedance distribution function for greatly reducing edge scattering and an optimal model of the impedance taper material are presented. It is helpful to the design of radar absorbing materials.

Keywords：radar cro ss sect ion　radar abso rbing material　impedance st rip　method of moment

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