

Abstracts

Coupling of edge-element and mode-matching for multistep dielectric discontinuity in guiding structures

Shanjia Xu and Xinquing Sheng. "Coupling of edge-element and mode-matching for multistep dielectric discontinuity in guiding structures." 1997 Transactions on Microwave Theory and Techniques 45.2 (Feb. 1997 [T-MTT]): 284-287.

A new approach is proposed for dielectric multistep discontinuity in guiding structures which combines edge-element analysis with the mode-matching method and multimode network theory. It is demonstrated that the approach has the generality of the edge-element analysis and the simplicity of the multimode network method, while retaining the high accuracy of the mode-matching method. The calculations for different multistep discontinuities verify the effectiveness and suitability of the approach for analysis of three-dimensional (3-D) lossy dielectric discontinuity problem.

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