Abstracts

Modal scattering matrix of the general step discontinuity in elliptical waveguides

P. Matras, R. Bunger and F. Arndt. "Modal scattering matrix of the general step discontinuity in elliptical waveguides." 1997 Transactions on Microwave Theory and Techniques 45.3 (Mar. 1997 [T-MTT]): 453-458.

In this paper, a direct mode-matching technique is proposed for the calculation of the modal scattering matrix of nonconfocal, twisted, and/or displaced step discontinuities in elliptical waveguides of different cross sections, For the convenient treatment of the Mathieu functions, an efficient trigonometric series expansion technique is used, As examples, the scattering parameters are calculated for typical step discontinuities demonstrating the flexibility of the method.

❑ Return to main document.