Abstracts

Discontinuities in planar chirowaveguides

Xinzhang Wu and D.L. Jaggard. "Discontinuities in planar chirowaveguides." 1997 Transactions on Microwave Theory and Techniques 45.5 (May 1997, Part I [T-MTT]): 640-647.

In this paper, we propose, develop, and implement an exact method to analyze the effect of discontinuities in open planar chirowaveguides. The method combines the building-block approach of multimode network theory with a rigorous mode-matching procedure. Both the scattering of discrete spectra surface-wave modes and the continuous spectra radiation and evanescent modes are discussed in this paper. The introduction of equivalent transmission-line networks brings new physical insight into the overall behaviour of the discontinuities. Features such as symmetrical properties of the structure are also investigated. Based on the analysis, numerical results are displayed to demonstrate the usefulness of this approach and to discuss mode conversion and radiation characteristics of discontinuities.

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