Abstracts

The Complete Spectrum of Image Line

T. Rozzi and J.S. Kot. "The Complete Spectrum of Image Line." 1989 Transactions on Microwave Theory and Techniques 37.5 (May 1989 [T-MTT]): 868-874.

As image line is an open waveguide, its finite, discrete spectrum of bound modes is complemented by a continuum. The latter plays an important role in discontinuity and radiation problems arising in circuit components and antenna applications. However, the continuous spectrum has failed to receive attention so far, possibly because of the essential two-dimensional, nonseparable nature of the problem. In this paper, we derive from basic principles the complete orthonormalized spectrum, under LSE/LSM assumptions, by means of a method of "partial wave phase shifts." The results are applicable to radiation and discontinuity problems in image line.

❑ Return to main document.