Abstracts

Propagation, Attenuation, and Dispersion Characteristics of Inhomogeneous Dielectric Slab Waveguides

E.F. Kuester and D.C. Chang. "Propagation, Attenuation, and Dispersion Characteristics of Inhomogeneous Dielectric Slab Waveguides." 1975 Transactions on Microwave Theory and Techniques 23.1 (Jan. 1975 [T-MTT] (Special Issue on Integrated Optics and Optical Waveguides)): 98-106.

A numerical method based upon invariant imbedding and the transverse impedance concept is applied to the problem of calculating various properties of inhomogeneous slab waveguides. The approach appears not only to be rapidly convergent but is also capable of giving arbitrary accuracy for any given mode. In particular, some interesting properties of a class of asymmetric profiles are pointed out, relating to discussions of lossy structures, temporal pulse distortion, and spatial broadening.

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