Abstracts

Analysis of the Hybrid Modes for an Eccentrically Cladded Fiber (Short Papers)

A.D. Lyras, J.A. Roumeliotis, J.D. Kanellopoulos and J.G. Fikioris. "Analysis of the Hybrid Modes for an Eccentrically Cladded Fiber (Short Papers)." 1983 Transactions on Microwave Theory and Techniques 31.11 (Nov. 1983 [T-MTT]): 945-950.

This paper examines the hybrid-cladding modes of an eccentrically cladded three-layer dielectric fiber. The solutions are specialized to small eccentricities, and exact closed-form expressions for the normalized deviations of the cutoff wavenumbers from those of the concentric case are determined. Numerical results for various types of hybrid-cladding modes of the fiber are given. For certain values of the parameters, it is possible to enhance the operating bandwidth of the basic hybrid mode HE/sub 11/ over the conventional concentric fiber because its cutoff frequency can be shown to remain zero.

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