Abstracts

Cutoff Frequency of a Homogeneous Optical Fiber with Arbitrary Cross Section

C.-C. Su. "Cutoff Frequency of a Homogeneous Optical Fiber with Arbitrary Cross Section." 1985 Transactions on Microwave Theory and Techniques 33.11 (Nov. 1985 [T-MTT]): 1101-1105.

Through an original derivation of the boundary conditions right at cutoff, the method of circular-harmonic expansion proposed by Goell to calculate propagation constants is extended to treat cutoff frequencies of homogeneous optical fibers with arbitrary cross sections in the rigorous vector form. This circular-harmonic method is also extended to the scalar form, from which the cutoff frequency can be obtained in a simpler way. Numerical results of cutoff frequencies of both the vector and the scalar forms are presented.

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