Abstracts

Field Profile in a Single-Mode Curved Dielectric Waveguide of Rectangular Cross Section

T.N. Trinh and R. Mittra. "Field Profile in a Single-Mode Curved Dielectric Waveguide of Rectangular Cross Section." 1981 Transactions on Microwave Theory and Techniques 29.12 (Dec. 1981 [T-MTT] (1981 Symposium Issue)): 1315-1318.

An approximate and simple method for predicting the field profile in a curved dielectric waveguide of rectangular cross section is described. For a single-mode propagation, it is shown that the transverse field can be approximated inside the dielectric guide by the Airy function of the first kind and that the radial attenuation constant is a function of the bending radius outside the guide. Experimental verification of the theoretical results is included.

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