Abstracts

Cutoff Frequencies of Guiding Structures with Circular and Planar Boundaries

B.N. Das, S.B. Chakrabarty and A.K. Mallick. "Cutoff Frequencies of Guiding Structures with Circular and Planar Boundaries." 1995 Microwave and Guided Wave Letters 5.6 (Jun. 1995 [MGWL]): 186-188.

The paper presents a method of evaluation of cut-off frequencies of a guiding structure consisting of two eccentric circular arcs with edges shorted by conducting planes. Combination of conformal transformation and method of finite difference is used for the analysis. The general formulation is applied to the limiting cases of lunar guide and also the guiding structure of semicircular cross section with a semi-circular dent along its diameter. Numerical data for TE and TM modes are presented for different angular separation between the shorting planes, distance between the centers and ratio of radii.

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