Abstracts

Analysis of an Oval Symmetrically Located Inside a Rectangular Boundary by Conformal Mapping (Short Papers)

B.N. Das, K.V.S. Rao and A.K. Mallick. "Analysis of an Oval Symmetrically Located Inside a Rectangular Boundary by Conformal Mapping (Short Papers)." 1983 Transactions on Microwave Theory and Techniques 31.5 (May 1983 [T-MTT]): 403-406.

This paper describes the analysis of a transmission line having an oval-shaped center conductor syrnmetrically placed inside an outer conductor in the form of a rectangular waveguide. A conformal transformation is used to calculate the characteristic impedances of oval, elliptic, circular, and planar conductors. The impedance data of these structures are presented in the form of charts for different aspect ratios of the rectangular outer condnctor. The charge distribution on the center conductor is also determined.

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