Abstracts

Effect of Ellipticity on Dominant-Mode Axial Ratio in Nominally Circular Waveguides

P.I. Sandsmark. "Effect of Ellipticity on Dominant-Mode Axial Ratio in Nominally Circular Waveguides." 1955 Transactions on Microwave Theory and Techniques 3.5 (Oct. 1955 [T-MTT]): 15-20.

An investigation is made of the effect of ellipticity on the dominant-mode axial ratio (AR) in nominally circular waveguides. Equations for calculating the AR are derived for the case where the difference between the major and minor axes of the guide cross section is small and the waveguide is not too long. Values of AR obtained by calculations are compared with measured values, and a method for improving the AR performance of a waveguide run is demonstrated.

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