Abstracts

TE Modes of an Axially Multiple-Grooved Rectangular Waveguide

K.P. Ericksen and A.M. Ferendeci. "TE Modes of an Axially Multiple-Grooved Rectangular Waveguide." 1995 Transactions on Microwave Theory and Techniques 43.9 (Sep. 1995, Part I [T-MTT]): 2001-2006.

A method is developed to calculate the TE mode fields and cut-off frequencies of an axially multiple-grooved rectangular (AGR) waveguide. A low frequency AGR waveguide is used as a part of a microwave cavity and the cut-off frequencies are measured in order to verify the analytically derived results. Excellent agreement between the measured and calculated values provide the basis for the design of waveguides for millimeter wave applications. The method has also been extended to a waveguide with multiple grooves cut into two of its broad wall parallel surfaces.

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