

Abstracts

Measurements of Dispersion Characteristics and Field Distributions in Rectangular-Dielectric Waveguide and its Modifications

K. Ogusu. "Measurements of Dispersion Characteristics and Field Distributions in Rectangular-Dielectric Waveguide and its Modifications." 1978 Transactions on Microwave Theory and Techniques 26.3 (Mar. 1978 [T-MTT]): 169-171.

The author has previously numerically analyzed transmission characteristics of several dielectric waveguides by applying generalized telegraphist's equations. The technique may be applicable to a wide class of dielectric waveguides with arbitrary dielectric profile and cross section. In this paper, the dispersion characteristics and the field distributions in rectangular-dielectric waveguides and in single material fibers have been measured at X-band frequencies to verify the validity of the analysis. Good agreement between measured and calculated results shows that the analysis is useful to study the transmission characteristics of dielectric waveguides.

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