# Abstracts

## Approximation Technique for Dielectric Loaded Waveguides

*W.E. Hord and F.J. Rosenbaum. "Approximation Technique for Dielectric Loaded Waveguides." 1968 Transactions on Microwave Theory and Techniques 16.4 (Apr. 1968 [T-MTT]): 228-233.*

An algebraic procedure is described which yields approximate values for the cutoff frequencies and propagation constants of dielectric-loaded waveguides. The procedure is demonstrated for a waveguide completely filled with an anisotropic dielectric and for waveguides partially filled with isotropic dielectrics. For the latter case results are tabulated for five types of waveguide loading. The symmetrically loaded waveguide is used to show the accuracy which may be expected. This procedure is shown to be identical with the Rayleigh-Ritz variational method but with the advantage that it provides a systematic approach to improve the accuracy and to handle a multitude of waveguide geometries.

❑ Return to main document.