# Abstracts

## Characteristics of Loaded Rectangular Waveguides

*Y. Mushiake and T. Ishida. "Characteristics of Loaded Rectangular Waveguides." 1965 Transactions on Microwave Theory and Techniques 13.4 (Jul. 1965 [T-MTT]): 451-457.*

Electromagnetic fields of a rectangular waveguide with an arbitrarily loaded slab are theoretically analyzed. Eigenvalues for the transmission modes are presented in the form of universal eigenvalue charts. Electric field distributions in the loaded waveguide are obtained theoretically, and they are compared with the results of measurements. Power attenuation is also discussed, and attenuation charts that give the lowest limitation for the attenuation are shown. As an example of application the attenuation characteristic of waveguide resistance attenuators are investigated, and a new interpretation is derived for the phenomena where the curves of attenuation characteristic have sharp peak points.

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