# Abstracts

## Reflection of a Pyramidally Tapered Rectangular Waveguide

*K. Matsumaru. "Reflection of a Pyramidally Tapered Rectangular Waveguide." 1959 Transactions on Microwave Theory and Techniques 7.2 (Apr. 1959 [T-MTT]): 192-196.*

The reflection coefficient Gamma of a pyramidally tapered rectangular waveguide is derived by assuming that the taper impedance is proportional to the height and guide wavelength and inversely proportional to the width of the taper cross section. It is a shown that the loci of Gamma, plotted in the K plane as a function of taper length for some conventional tapers, do not pass through the center of the chart at multiples of a half-guide wavelength as for an exponential line, but instead they converge almost concentrically. The frequency characteristic of the pyramidally tapered waveguide is compared with other types of tapers. Typical 7-kmc experimental results for several tapers differing in length are presented.

❑ Return to main document.