# Abstracts

## TE Mode Excitation on Dielectric Loaded Parallel Plane and Trough Waveguides

*M. Cohn, E.S. Cassedy and M.A. Kott. "TE Mode Excitation on Dielectric Loaded Parallel Plane and Trough Waveguides." 1960 Transactions on Microwave Theory and Techniques 8.5 (Sep. 1960 [T-MTT]): 545-552.*

A theoretical and experimental study of the launching of TE surface wave modes on dielectric loaded parallel plane and trough waveguides has been performed. The source is a linear transverse current filament perpendicular to and extending across the space between the parallel side walls. Families of curves are presented, which show the bidirectional Iaunchlng efficiencies for the dominant TE modes of these two transmission lines as a function of dielectric constant, dielectric slab thickness, and current filament location. Measured bidirectional efficiencies are compared to the theoretically predicted values. Measured unidirectional launching efficiencies as high as 97 per cent were obtained for the case where a short circuit is located on one side of the current filament.

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