

# Abstracts

## Propagation in a Rectangular Waveguide Partially Filled with a Linearly Varying Dielectric (Correspondence)

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*G. Gonzalez and V.R. Johnson. "Propagation in a Rectangular Waveguide Partially Filled with a Linearly Varying Dielectric (Correspondence)." 1970 Transactions on Microwave Theory and Techniques 18.7 (Jul. 1970 [T-MTT]): 404-406.*

A closed form solution for the TE/sub lo/ mode in a rectangular waveguide partially filled with a linearly inhomogeneous dielectric is obtained. The dielectric is assumed to vary linearly in one transverse direction. The theory developed for the partially filled waveguide is extended to consider the characteristic equation of the completely filled waveguide with a linearly inhomogeneous dielectric. The phase velocity of the fields in the waveguide is studied by considering the  $\omega / \beta$  diagrams.

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