Abstracts

Air-Gap Effect in Rectangular Waveguide Containing a Lossy H-Plane Dielectric Slab

J.B. Ness and M.W. Gunn. "Air-Gap Effect in Rectangular Waveguide Containing a Lossy H-Plane Dielectric Slab." 1978 Transactions on Microwave Theory and Techniques 26.11 (Nov. 1978 [T-MTT]): 894-897.

The propagation coefficient for a partially filled rectangular waveguide containing a lossy H-plane slab against the broad wall can be significantly altered if an air gap exists between the slab and the wall of the waveguide. The solutions of the dispersion equation show that the attenuation and phase coefficients may be increased as well as decreased by the presence of an air gap. For a fully filled waveguide the effect of an air gap is maximized if the gap is equally distributed at the top and bottom of the sample.

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