

Abstracts

Rectangular Waveguides with Impedance Walls (Comments)

P.R. McIsaac. "Rectangular Waveguides with Impedance Walls (Comments)." 1974 Transactions on Microwave Theory and Techniques 22.11 (Nov. 1974 [T-MTT]): 972-973.

In the above paper, Dybal et al. discuss the propagation characteristics of several rectangular waveguides with corrugated walls and analyze them by using impedance boundaries to simulate the corrugated walls. One of the waveguides discussed, called an E guide, has longitudinal corrugations in all four walls. The authors claim that this waveguide will support E modes but not H modes. However, this waveguide has an isotropic homogeneous dielectric surrounded by a conducting boundary which is longitudinally uniform. Therefore, if the boundary is assumed to be a perfect conductor, this waveguide must support a complete set of both E and H modes; the presence of the corrugations cannot change this conclusion.

 [Return to main document.](#)