

Abstracts

Dielectric Loaded Elliptical Waveguides

S.R. Rengarajan and J.E. Lewis. "Dielectric Loaded Elliptical Waveguides." 1980 Transactions on Microwave Theory and Techniques 28.10 (Oct. 1980 [T-MTT]): 1085-1089.

Wave propagation in a metallic elliptic waveguide loaded with a dielectric rod or a dielectric lining is investigated theoretically. The mode spectrum for both slow and fast hybrid modes is obtained by numerical solution of the characteristic equations. Correspondence is established between the modes of the loaded and unloaded elliptical waveguides. Typical field plots for HE_{01} and EH_{01} modes are presented. Power flow, power loss, and attenuation are obtained using a perturbation method.

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