Abstracts

Electric-Field Distribution Along Finite Length Lossy Dielectric Slabs in Waveguide

L.M. Liu, F.J. Rosenbaum and W.F. Pickard. "Electric-Field Distribution Along Finite Length Lossy Dielectric Slabs in Waveguide." 1976 Transactions on Microwave Theory and Techniques 24.4 (Apr. 1976 [T-MTT]): 216-219.

A procedure is given to calculate the reflection and transmission coefficients of a full-height dielectric slab centered in a rectangular waveguide. The effects of loss and of finite length are included. The magnitude squared of the electric field along the slab is calculated in order to predict inhomogeneous heat input to the sample. These results are compared with experimental measurements on several materials and the pupae of Tenebrio molitor.

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