Abstracts

TM and TE Mode Surface Waves on Grounded, Anisotropic, Inhomogeneous, Lossless, Dielectric Slabs (Correspondence)

D.A. Holmes. "TM and TE Mode Surface Waves on Grounded, Anisotropic, Inhomogeneous, Lossless, Dielectric Slabs (Correspondence)." 1964 Transactions on Microwave Theory and Techniques 12.1 (Jan. 1964 [T-MTT]): 141-141.

J.H. Richmond has given the WKB solutions for the field distribution of surface waves on inhomogeneous, isotropic, plane layers. It is the purpose of this letter to extend his work to include a simple anistropy in the dielectric constant by considering a diagonalized relative permittitity tensor with components epsilon/sub x/(x), epsilon/sub y/(x), and epsilon/sub z/(x). The geometry is the same as before except that a perfectly conducting plane is now positioned at x = 0. For easy reference we have used the same notation as Richmond, except where specified otherwise. Compactness in notation has been achieved by expressing the integrations from 0 to x and by considering the x variations outside the slab to be exp {alpha(x-alpha)}.

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