

Abstracts

Propagation of Surface Waves on an Inhomogeneous Plane Layer

J.H. Richmond. "Propagation of Surface Waves on an Inhomogeneous Plane Layer." 1962 Transactions on Microwave Theory and Techniques 10.6 (Nov. 1962 [T-MTT]): 554-558.

The permittivity of a plane layer is assumed to vary continuously as a function of distance measured from the surface. Solutions for the field distributions of surface waves on the inhomogeneous layer are developed with the WKB technique. Transcendental equations for the phase velocity are derived for TE and TM modes. These equations are solved most conveniently with the aid of phase-velocity graphs which are included. The accuracy of the solution is verified by comparison with the rigorous solution for an exponential inhomogeneity.

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