

Yang, J., **Zhou, H.**, Two-Dimensional Equations for Electromagnetic Waves in Multi-Layered Thin Dielectric Films, International Journal of Solids and Structures, 42, 2005, 6662–6679

Abstract

Two-dimensional equations for electromagnetic fields in a multi-layered thin dielectric film are derived from the three-dimensional equations of electrodynamics by expanding the vector potential of the electromagnetic fields into trigonometric series expansions of the film thickness coordinate. The lower order equations are examined. It is shown that they can describe certain long waves in the film. The equations are useful for modeling thin film devices.

Keywords

Plate, Electromagnetic