Abstracts

Elastic Waves Guided by a Solid Layer Between Adjacent Substrates

R.C.M. Li and K.-H. Yen. "Elastic Waves Guided by a Solid Layer Between Adjacent Substrates." 1972 Transactions on Microwave Theory and Techniques 20.7 (Jul. 1972 [T-MTT]): 477-486.

The present investigation is motivated by the problem of coupling Rayleigh waves between adjacent substrates when either substrate is nonpiezoelectric, in which case it becomes necessary to resort to some mechanical means to achieve this coupling. The use of a fluid coupling layer has been investigated and experimentally demonstrated elsewhere, while the use of a solid layer, with its inherently greater mechanical stability, has also been proposed. In this work, the operating characteristics of a specific solid-layer structure are predicted on the basis of a theoretical analysis, which furnishes the propagation characteristics and field structure of the waves which may be guided by a solid layer between two identical solids.

❑ Return to main document.