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The Nonreciprocal Properties of Lateral Shift in the Gyrotropic Medium Slab

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Abstract

By employing classic electromagnetic theory, we have theoretically investigated the properties of lateral shift(LS) in the interface between air and the gyrotropic medium (gyroelectric medium and gyromagnetic medium). The influence of the electromagnetic(EM) parameters, incident angle and thickness of the plate on the shift have also been analyzed. Due to the gyrotropic element of EM parameters, the numerical results have shown that the LS is nonreciprocal with the incident angle, EM parameters and thickness of the plate.

Keywords:Lateral Shift , Gyrotropic Medium , Nonreciprocal

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