

Abstracts

Scattering of Unidirectional Surface Waves

S.R. Seshadri. "Scattering of Unidirectional Surface Waves." 1963 Transactions on Microwave Theory and Techniques 11.4 (Jul. 1963 [T-MTT]): 238-243.

A perfectly conducting plane screen embedded in a gyrotropic medium is shown to be able to support a unidirectional surface wave. Such a surface wave is assumed to be incident on the top of a semi-infinite screen. At the edge the incident power is converted partly into a reflected surface wave which travels on the bottom of the screen and partly into a space wave. The angular distribution of the radiated energy as well as the power-reflection and the power-transmission coefficients are evaluated. Total reflection is shown to occur for a certain band of frequencies.

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