Abstracts

Analysis of Step Discontinuities on Planar Dielectric Waveguide Containing a Gyrotropic Layer

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Nonreciprocal wave propagation characteristics through step discontinuities on planar dielectric waveguides with a gyrotropic layer such as ferrite are presented. In the proposed nonreciprocal structures, the wave propagates from a dielectric waveguide to a ferrite and dielectric waveguide or vice versa, where two structures are connected to create abrupt discontinuities. Nonreciprocal scattering coefficients for TE excitation are calculated at 35 GHz using the well-known mode-matching method.

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