

Modal Behavior of Dominant Modes on Gyromagnetic Asymmetric Coupled Lines in Both Leaky and Nonradiation Regions

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By employing rigorous full-wave spectral domain approach, the complex propagation constants of the dominant modes on gyromagnetic asymmetric coupled lines are shown to support both complex modes and leaky modes. As one gradually increases the dielectric loading of the gyromagnetic lines, the transformation of dominant complex modes into a pair of a forward leaky mode and a backward leaky mode is observed. All the dominant modes reported here have been verified by examining their corresponding transverse field plots.

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