Abstracts

Complex Leaky Waves of a Partially Open Nonreciprocal Slotline on Gyromagnetic Substrate

C.-K.C. Tzuang, K.-F. Fuh and M. Mrozowski. "Complex Leaky Waves of a Partially Open Nonreciprocal Slotline on Gyromagnetic Substrate." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1693-1696.

The full-wave spectral domain approach is applied to investigate a partially open slotline integrated on multi-dielectric layers containing a ferrite substrate. When frequency decreases from high frequency to low frequency, the bounded modes start to leak in the form of improper forward leaky waves. Then one of the improper forward leaky waves becomes proper backward leaky wave as frequency decreases again. This constitutes a pair of a forward leaky wave and a backward leaky wave that further interact in the mode-coupling way when frequency further decreases. All the data presented have been verified by examining the transverse electromagnetic field patterns.

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