Abstracts

Leaky-wave dispersion behavior on a grounded ferrite slab waveguide

A.B. Yakovlev and G.W. Hanson. "Leaky-wave dispersion behavior on a grounded ferrite slab waveguide." 2002 Microwave and Wireless Components Letters 12.10 (Oct. 2002 [MWCL]): 398-400.

In this letter, leaky-wave dispersion behavior is studied for a grounded biased-ferrite slab waveguide. The full-wave analysis encompasses space-wave leaky modes, surface waves, and magnetostatic modes supported by a ferrite slab as the magnetic bias field varies in strength. In particular, as the bias field increases from a null value the TE leaky-wave cutoff frequencies of the isotropic slab split into two cutoff frequencies, resulting in complicated dispersion behavior of the corresponding forward and backward leaky waves. TM modes are unaffected by variation in the strength of the bias field for this orientation.

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