Abstracts

Surface Wave Propagation through a Small Gap Between Oppositely Magnetized Ferrite Substrates

N.C. Srivastava. "Surface Wave Propagation through a Small Gap Between Oppositely Magnetized Ferrite Substrates." 1978 Transactions on Microwave Theory and Techniques 26.3 (Mar. 1978 [T-MTT]): 213-215.

This paper presents an investigation of electromagnetic wave propagation in a thin dielectric slab sandwiched between oppositely magnetized ferrite substrates. It is found that this configuration supports forward surface wave modes with a lower cutoff frequency omega/sub L/ = gamma H/sub 0/, which is smaller than the lower cutoff frequency (omega'/sub L/ = gamma[H/sub 0/(H/sub 0/ + 4pi M/sub 0/)]/sup 1/2/, for the surface waves in previously examined structures. Backward surface waves propagate in a broad band in the high frequency region. When the saturation magnetizations of the substrates are the same, the group delay time varies linearly with the wave frequency as well as the biasing field throughout the range of allowed modes, except near the cutoffs.

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