Abstracts

Existence of a Leaky Dominant Mode on Microstrip Line with an Isotropic Substrate: Theory and Measurements

D. Nghiem, J.T. Williams, D.R. Jackson and A.A. Oliner. "Existence of a Leaky Dominant Mode on Microstrip Line with an Isotropic Substrate: Theory and Measurements." 1996 Transactions on Microwave Theory and Techniques 44.10 (Oct. 1996, Part I [T-MTT]): 1710-1715.

A newly discovered leaky dominant mode is reported for conventional microstrip line on an isotropic substrate, at higher frequencies. The existence of this leaky mode has been confirmed both numerically and experimentally. This new mode exists independently of, and in addition to, the customary bound dominant mode. It leaks power away from the line into the fundamental TM/sub 0/ surface wave of the surrounding grounded substrate, and may therefore be responsible for spurious microstrip circuit performance at higher frequencies. This could have important implications for millimeter-wave circuits.

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