Abstracts

Slow Waves Guided by Parallel Plane Tape Guides (Short Papers)

H.J. Fink and J.R. Whinnery. "Slow Waves Guided by Parallel Plane Tape Guides (Short Papers)." 1982 Transactions on Microwave Theory and Techniques 30.11 (Nov. 1982 [T-MTT]): 2020-2023.

Waves guided by two parallel metallic plates of infinite extent, containing cuts at periodic intervals, are investigated for a number of cases with special emphasis upon the relative directions of the cuts in the top and bottom plates. Two fundamental slow-wave modes exist for all frequencies, in general. The latter are functions of tilt angles of the cuts, frequency, and plate separation. For tilt angles psi in the top and ± psi in the bottom plane, the amplitudes of the even and odd modes are independent of each other, while for other angles in the bottom plane a predetermined linear combination of even and odd terms exist for each mode.

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