Abstracts

Fringing-Field Effects in Edge-Guided Wave Devices

P. de Santis. "Fringing-Field Effects in Edge-Guided Wave Devices." 1976 Transactions on Microwave Theory and Techniques 24.7 (Jul. 1976 [T-MTT]): 409-415.

An equivalent model is presented for evaluating the fringing-field effects in edge-guided waves (EGW) propagating along ferrite microstrip circuits. It is based on the approximate model developed by Getsinger for nonferromagnetic microstrip circuits. Fringing-field effects are characterized by a fringing-field parameter b/b' whose numerical value is determined by experiment. Measurements are made on EGW resonators of various shapes for different values of the applied magnetic bias. Finally, the fringing-field parameter is used to evaluate the ratio between the reactive power stored in the fringing fields and the RF power in the ferrite under the strip conductor in a disk resonator.

❑ Return to main document.