Abstracts

Characterization of Off-Slot Discontinuity in Unilateral Fin Line (Short Papers)

A.K. Gupta and A. Biswas. "Characterization of Off-Slot Discontinuity in Unilateral Fin Line (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.6 (Jun. 1995 [T-MTT]): 1398-1400.

A new type of fin line discontinuity, which consists of a rectangular conducting strip placed transversely on the back side of the air dielectric interface containing the slot, is characterized in this work. Modeling of the fin line cavity containing the discontinuity is carried out using hybrid mode analysis, and then the Transverse Resonance Technique is used to extract equivalent circuit parameters of the discontinuity. Suitable sets of basis functions are chosen for accurately representing the field in the slot and the current on the strip. Calculated results are compared with the measured results for a sample discontinuity to validate the choice of the basis functions.

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