Abstracts

Finite Element Analysis of Inductive Strips in Unilateral Finlines

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A three-dimensional finite element method is used in conjunction with the boundary-marching algorithm to characterize inductive strips in unilateral finlines. For an idealized finline of zero fin thickness, without mounting groove effect, the results agree with those obtained by the hybrid-mode spectral-domain approach to within a few percent with only 98 elements. Field distributions for the dominant propagation mode in unilateral finlines are generated with the boundary-marching algorithm. The effect of metalization thickness, the influence of the mounting groove, and the effect of substrate bending on the discontinuity parameters are studied in detail.

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