Abstracts

A Microstrip Line on a Chiral Substrate (Short Papers)

M.S. Kluskens and E.H. Newman. "A Microstrip Line on a Chiral Substrate (Short Papers)." 1991 Transactions on Microwave Theory and Techniques 39.11 (Nov. 1991 [T-MTT]): 1889-1891.

Right and left circular vector potentials are developed and used in a spectral-domain solution for a microstrip transmission line on a chiral substrate. These vector potentials have properties similar to those of the usual magnetic and electric vector potentials, except that they result in circular rather than linearly polarized fields, thereby simplifying field expansions in chiral media. The chiral microstrip line does not have bifurcated modes like other chiral guided wave structures; however, the chiral substrate causes a significant asymmetry in both the fields and currents.

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