Abstracts

Surface-Wave Leakage Properties of Coplanar Strips

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Propagation characteristics of coplanar strips (CPS), balanced transmission line widely used in uniplanar circuits, is investigated with the spectral domain analysis. Besides the conventional coplanar strips mode, an extra surface-wavelike dominant mode can be supported by coplanar strips in lower frequency region. The bound modes evolve into a complex leaky mode in higher frequency region in a similar way to those of coplanar waveguide (CPW). No sharp and deep minima in leakage constants are found after the onset of the leakage, as in the coplanar waveguide case. Furthermore, the physical complex mode disappears in wider strip cases.

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