Abstracts

Radiation Modes of Slotline with Application to Millimetric Circuits

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Bound modes of slotline have been extensively investigated. Due to its open nature, slotline also features a continuum of radiation modes both in air and into the dielectric substrate that are excited by discontinuities such as steps, bends, short circuits, etc. Moreover, transverse metal strips across the slot form array patterns in slotline antennas, coupling strongly to radiation modes. Such fields propagate without attenuation a long way away from their source and are difficult to, handle by standard numerical techniques. This part of the spectrum has never been investigated before. This contribution deals with the continuum of slotline in full hybrid form: its simple application to the problem of transverse metal strip is then demonstrated providing iucluding currently details of radiation patterns. The cascade of strips, interaction via the radiation field, is being investigated.

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