Abstracts

Transient Analysis of a Stripline Having a Corner in Three-Dimensional Space

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The transient analysis of electromagnetic fields has shown its utility not only in clarifying the variation of the fields in time but also in gaining information on mechanisms by which the distributions of an electromagnetic field at the stationary state are brought about. We have recently proposed a new numerical method for the transient analysis in three-dimensional space by formulating the equivalent circuit based on Maxwell's equation by Bergeron's method. The resultant nodal equation is uniquely formulated in the equivalent circuit for both the electric field and the magnetic field. In this paper, we deal with the stripline which should be analyzed essentially in three-dimensional space because of its structure, The time variation of the electric and magnetic field of the stripline having a corner is analyzed and the remarkable changing of distribution of the field is presented as a parameter of time and of conditions imposed by the corner stucture.

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