Abstracts

Transient Analysis of Microstrip Gap in Three-Dimensional Space (Short Papers)

S. Koike, N. Yoshida and I. Fukai. "Transient Analysis of Microstrip Gap in Three-Dimensional Space (Short Papers)." 1985 Transactions on Microwave Theory and Techniques 33.8 (Aug. 1985 [T-MTT]): 726-730.

In this paper, we deal with the microstrip gap that should be analyzed in three-dimensional space. The time variations of the electric field at each surface of the stripline having a finite metallization thickness are analyzed. Our method of analysis is based on both an equivalent circuit of Maxwell's equations and Bergeron's method. The former has advantages in the vector analysis by using all electromagnetic components. The latter has advantages in the time-domain analysis of the field. Therefore, our method can analyze field variations in three-dimensional space and time. We present the time variation of the instantaneous electric-field distributions below the strip, at the side of the strip, and at the gap end surface. These results show how the steady-state field distribution grows in the gap.

❑ Return to main document.