Abstracts

Analysis of a Wide Radiating Slot in the Ground Plane of a Microstrip Line

An analysis of a wide rectangular radiating slot excited by a microstrip line is described. Coupled integral equations are formulated to find the electric current distribution on the feed line and the electric field in the aperture. The solution is based on the method of moments and using the space domain Sommerfeld type Green's function. The information about the input impedance or reflection coefficient is extracted from the electric current distribution on the microstrip line utilizing the matrix pencil technique. The theoretical analysis is described and data are presented and compared with other theoretical and experimental results.

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