

Abstracts

Effects of Air Gap and Finite Metal Plate Width on NRD Guide

H. Shigesawa, M. Tsuji and A.A. Oliner. "Effects of Air Gap and Finite Metal Plate Width on NRD Guide." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 119-122.

A potentially serious problem that may arise with nonradiative dielectric (NRD) guide circuitry is described. First, a small unwanted air gap would generate a leaky hybrid mode that could produce cross talk between components of a circuit, and, second, if the plate width were also finite another type of leaky mode would be created similar to the well-known channel guide leaky mode. Under appropriate circumstances, this additional mode would couple to the leaky NRD guide mode and seriously complicate the performance characteristics of the NRD guide.

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