

# Abstracts

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

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*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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