Abstracts

Analysis of Small Aperture Coupling Between Rectangular Waveguide and Microstrip Line

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This paper presents a generalized analysis on aperture coupling between a microstripline and a rectangular waveguide. The orthonormalized modal functions for the microstrip line required for the determination of the equivalent diopole moment are found from its equivalent parallel plate configuration. Expressions for coupling are obtained for transmissions lines with their axes parallel, the lines forming a T-junction and also for cross-guide couplers. Theoretical results show good agreement with the experimental data for all cases under investigation.

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