Abstracts

Continuously Variable Directional Couplers in Rectangular Waveguide

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Variable directional couplers can be constructed by placing a movable dielectric slab in the region of the coupling aperture. The coupling and directivity are a function of the position of the slab. For a two hole coupler, the change in coupling depends principally upon the variation of the field intensity at the coupling apertures. The directivity is solely a function of the difference in phase constants of the two waveguides. For a long, slot narrow wall coupler, the coupling is a function of both intensity and phase variation. Some applications of this device to microwave measurements are described.

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