

Broadband Dielectric Waveguide 3-dB Couplers Using Asymmetrical Coupled Lines

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It is shown how wideband 3-dB couplers can be designed by appropriately taking advantage of the dispersion and the frequency dependence of the coupling per unit length between two dielectric waveguides with asymmetrical cross sections. Theoretical methods for computing frequency responses of dielectric waveguide couplers composed of asymmetrical coupled guides are discussed. Experimental verifications of theoretical results are presented.

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