

Coupling Between a Dielectric Image Guide and a Dielectric Resonator

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Since many years dielectric guides have been used to realize microwave components at millimeter wave frequencies. In this frequency band, the coupling of dielectric resonators with such guides will permit to obtain integrated dielectric components like filters or oscillators. This paper presents the study of the coupling between a dielectric image guide and the TE/sub 0 gamma delta/ cylindrical dielectric resonator mode. A lumped equivalent circuit is given and the coupling coefficient between the guide and the resonator is evaluated. Experimental and theoretical results are also presented.

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