Abstracts

A Theoretical and Experimental Study of Coplanar Waveguide Shunt Stubs

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A comprehensive theoretical and experimental study of straight and bent coplanar waveguide (CPW) shunt stubs is presented. In the theoretical analysis, the CPW is assumed to be inside a cavity, while, the experiments are performed on open structures. For the analysis of CPW discontinuities with air-bridges, a hybrid technique has been developed which has been validated through extensive theoretical and experimental comparisons. Throughout this study, the effect of the cavity resonances on the behavior of the stubs with and without air-bridges is investigated. In addition, the encountered radiation loss due to the discontinuities is evaluated experimentally.

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