Abstracts

Mode conversion at GCPW-to-microstrip-line transitions

J.-P. Raskin, G. Gauthier, L.P. Katehi and G.M. Rebeiz. "Mode conversion at GCPW-to-microstrip-line transitions." 2000 Transactions on Microwave Theory and Techniques 48.1 (Jan. 2000 [T-MTT]): 158-161.

Mode conversion at the transition between grounded coplanar waveguide (GCPW) and microstrip line is demonstrated. Experimental results show the effect of overmoding in a conductor-backed coplanar waveguide on the transition behavior. A simple micromachining solution is used to cancel the parasitic modes triggered by the transition in the GCPW feed line. This results in an insertion loss of 0.3 dB and a return loss better than -18 dB from 75 to 110 GHz. The transition can prove very useful for millimeter-wave packaging and interconnects.

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