Abstracts

Experimental and Theoretical Characterizations of Very Thin Coplanar Waveguide and Coplanar Slow-Wave Structures

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A very thin coplanar waveguide and a slow-wave structure using a very thin coplanar strip have been characterized in a wide range of field penetration by comparing the measured transmission characteristics with the theoretical data calculated by the phenomenological loss equivalence method. The measured transmission characteristics show very good agreement with the calculated ones. It is shown that the effect of field penetration into the thin coplanar lines is significant over a wide range of frequency and must be included in the design of monolithic microwave integrated circuits.

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