Abstracts

High frequency interconnects on silicon substrates

G.E. Ponchak, A.N. Downey and L.P.B. Katehi. "High frequency interconnects on silicon substrates." 1997 Radio Frequency Integrated Circuits (RFIC) Symposium 97. (1997 [RFIC]): 101-104.

The measured propagation constant of coplanar waveguide (CPW) on silicon wafers as a function of the line dimensions and the resistivity of the Si wafer; CPW on GaAs wafers as a function of the line dimensions; and thin film microstrip (TFMS) fabricated with polyimide on the surface of a silicon wafer is presented. It is shown that the attenuation of CPW on 2500 /spl Omega/-cm Si wafers and of TFMS with a polyimide thickness of 4 /spl mu/m or greater is comparable to the attenuation of similar lines on GaAs.

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