Abstracts

Two-Layer Dielectric Microstrip Line Structure: SiO/sub 2/ on Si and GaAs on Si: Modeling and Measurement. (Short Papers)

R.A. Lawton and W.T. Anderson. "Two-Layer Dielectric Microstrip Line Structure: SiO/sub 2/ on Si and GaAs on Si: Modeling and Measurement. (Short Papers)." 1988 Transactions on Microwave Theory and Techniques 36.4 (Apr. 1988 [T-MTT]): 785-789.

Further development is reported of the modeling of the two-layer dielectric microstrip line structure by computing the scattering parameter S/sub 21/ derived from the model and comparing the computed value with the measured value over the frequency range from 90 MHz to 18 GHz. The sensitivity of the phase of S/sub 21/ and the magnitude of the characteristic impedance to various parameters of the equivalent circuit is also discussed. Examples are given of the measurement and modeling of the SiO/sub 2/ on silicon system to 18 GHz and the modeling of the GaAs on silicon system to 100 GHz.

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