

Abstracts

Suspended Slot Line Using Double Layer Dielectric (Short Papers)

R. Simons. "Suspended Slot Line Using Double Layer Dielectric (Short Papers)." 1981 *Transactions on Microwave Theory and Techniques* 29.10 (Oct. 1981 [T-MTT]): 1102-1107.

This paper presents a rigorous analysis of a) slot line on a double layer dielectric substrate, and b) slot line sandwiched between two dielectric substrates. The structure is assumed to be suspended inside a conducting enclosure of arbitrary dimensions. The dielectric substrates are assumed to be isotropic and homogeneous and are of arbitrary thickness and relative permittivity. The conducting enclosure and the zero thickness metallization on the substrate, are assumed to have infinite conductivity. The effect of shielding on the dispersion, characteristic impedance, and the effective dielectric constant are illustrated. These results should find application in the design and fabrication of MIC components and subsystems.

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