Abstracts

Measurement and Modeling of the Apparent Characteristic Impedance of Microstrip

W.J. Getsinger. "Measurement and Modeling of the Apparent Characteristic Impedance of Microstrip." 1983 Transactions on Microwave Theory and Techniques 31.8 (Aug. 1983 [T-MTT]): 624-632.

Voltage and current cannot be defined uniquely for microstrip except at zero frequency, and therefore microstrip has not been rigorously incorporated into circuit theory. However, in engineering practice, micro-strip exhibits an apparent characteristic impedance, denoted here by ZA, that can be measured. Three methods of measuring ZA were devised and used in measuring three impedance levels of microstrip. These methods are described and experimental results presented. The measurements of ZA were found to be consistent with the power-current characteristic impedance definition of the approximate longitudinal-section electric (LSE) model of nricrostrip. Simple approximate formulas for representing ZA are also discussed.

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