Abstracts

Strip Line with Rectangular Outer Conductor and Three Dielectric Layers

A general method is proposed for analyzing the transmission line characteristics of strip lines with rectangular outer conductor and multidielectric layers within a TEM wave approximation. This method uses Green's function for formulating the problem and a variational principle for obtaining practical solutions. The case of the microstrip line is first discussed, and numerical results are found to be consistent with other theories and experiments. The case of strip lines with a rectangular outer conductor and three dielectric layers is examined for various combinations of dielectric materials. Other applications of Green's function and the theoretical limitation of this method are also described.

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