Abstracts

Charge and Potential Distributions in Shielded Striplines

R. Mittra and T. Itoh. "Charge and Potential Distributions in Shielded Striplines." 1970 Transactions on Microwave Theory and Techniques 18.3 (Mar. 1970 [T-MTT]): 149-156.

A new method is presented for calculating the charge and potential distribution in shielded microstrip lines with stratified dielectric fillings. The boundary value problem associated with this structure is formulated in a rigorous manner and the solution is constructed by an extension of the function-theoretic technique. Several advantages of this method are pointed out. The most important of these is its numerical efficiency. Numerical results are presented for charge and potential distributions for several choices of design parameters. The characteristic impedance and the guide wavelength are obtained from the knowledge of the charge distribution. Comparisons are made with the published data and the agreement is found to be very satisfactory.

❑ Return to main document.