Abstracts

Longitudinal Current Density on Out- and In-Side Cylindrical Microstrip Lines (Short Papers)

J. Zehentner and P. Zornig. "Longitudinal Current Density on Out- and In-Side Cylindrical Microstrip Lines (Short Papers)." 1994 Transactions on Microwave Theory and Techniques 42.6 (Jun. 1994 [T-MTT]): 1100-1102.

The longitudinal current density distribution in conductors of the out- and inside cylindrical microstrip lines with homogeneous dielectric is derived. The distribution is found by converting a set of two coupled integral equations into a set of non-homogeneous linear equations. Their solution can be approximated by a simple closed-form function. The current density distribution is used in calculation of the characteristic impedance which agrees well with the results published earlier. The method is suitable for investigation of other two- and multiconductor cylindrical strip lines, as well.

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