Abstracts

A Universal Approximate Formula for Characteristic Impedance of Strip Transmission Lines with Rectangular Inner Conductors

An explicit expression is developed for the characteristic impedance of a microwave strip transmission line with rectangular inner conductor of arbitrary dimensions. The expression is exact for zero thickness and arbitrary width, exact for zero width and arbitrary thickness, and quite accurate (within 3% for the extreme cases of a square inner conductor of dimensions about 0.01 of plate separation, but in most cases of practical interest within 0.1%) throughout the entire range of thickness and width.

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