

Abstracts

A Causal Skin-Effect Model of Microstrip Lines

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A complete transmission line model including skin-effect is derived to show effects of conductor skin loss on both the attenuation and phase factors. Frequency dependent behaviors of a microstrip line is also included in the model. Distortion of a short pulse due to the skin-effect including attenuation, dispersion, and propagation delay are investigated. Simulation results indicate that the skin-effect cannot be neglected in the phase factor in low conductivity transmission lines.

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