

Electric Models for Crosstalk Prediction: Analysis and Performance Evaluation

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Abstract : In this paper, three electric equivalent models to evaluate crosstalk between three-conductor transmission lines are proposed. First, electric equivalent models for three-conductor transmission lines are presented. Secondly, rigorous equations to calculate the per-unit length inductive and capacitive parameters are developed. These models allow us to calculate crosstalk between conductors. Finally, to validate the presented models, we compare the theoretical results with simulation data. Obtained results show that proposed models can be used to predict crosstalk performance.

Keywords : near-end crosstalk, inductive parameter, L, Π , T models

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