Abstracts

Analysis of Slow-Wave Transmission Lines on Multi-Layered Semiconductor Structures Including Conductor Loss

J.-C. Liou and K.M. Lau. "Analysis of Slow-Wave Transmission Lines on Multi-Layered Semiconductor Structures Including Conductor Loss." 1993 Transactions on Microwave Theory and Techniques 41.5 (May 1993 [T-MTT]): 824-829.

Metal lines on semiconductor devices and circuits sometimes show slow-wave phenomena. To determine signal transmission characteristics along the lines, the typical assumption that metal is perfectly conducting is not always valid. In this paper, we use a simple and accurate means to include metallic loss in spectral domain analysis of planar transmission lines built on multi-layer semiconducting media. Experimental results with a modulation-doped field-effect transistor structure and comparison with the calculations are presented.

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