

Metal-insulator-semiconductor transmission lines

D.F. Williams. "Metal-insulator-semiconductor transmission lines." 1999 Transactions on Microwave Theory and Techniques 47.2 (Feb. 1999 [T-MTT]): 176-181.

This paper investigates the one-dimensional metal-insulator-semiconductor transmission line. It develops closed-form expressions for equivalent-circuit parameters, compares them to exact calculations, and explores their limitations. It also investigates the usual assumption of single-mode propagation and shows that, in certain fairly common circumstances, the fundamental mode of propagation becomes so lossy that it can no longer be considered to be the dominant propagating mode.

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