Abstracts

Dispersion Characteristics of Square Pulse with Finite Rise Time in Single, Tapered, and Coupled Microstrip Lines (Dec. 1991 [T-MTT])

P. Pramanick and R.R. Mansour. "Dispersion Characteristics of Square Pulse with Finite Rise Time in Single, Tapered, and Coupled Microstrip Lines (Dec. 1991 [T-MTT])." 1991 Transactions on Microwave Theory and Techniques 39.12 (Dec. 1991 [T-MTT] (1991 Symposium Issue)): 2117-2122.

The distortion of an electrical pulse, with finite rise time (quadratic-linear-quadratic transition) caused by dispersion as it propagates along a uniform microstrip, a tapered microstrip and a coupled pair of microstrips is investigated. Closed form analysis equations for single and coupled microstrips have been used to find the frequency dependent phase velocities. Results have been presented for two different taper profiles (exponential and triangular distributions). It is concluded that the optimization of the taper profile will provide the least pulse distortion.

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