Abstracts

Compression and Reshaping of Picosecond Electrical Pulses Using Dispersive Microwave Transmission Lines

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In this paper we newly propose a simple and effective method for reshaping and compressing picosecond electrical pulses generated from photoconductive switches. A piece of dispersive strip transmission line can be used as a "phase equalizer" to compensate the phase distortion included in asymmetric electrical pulses, resulting in effective reshaping and compression of these ultrashort pulses. Initial design formulas of the strip transmission lines for this purpose are presented, together with some computer simulation results showing the pulse reshaping and compression effects.

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