Abstracts

Low-Distortion and Low-Crosstalk Characteristics of Picosecond Pulses in a Dual-Plane Coupled Microstrip Lines Structure

Y. Qian and E. Yamashita. "Low-Distortion and Low-Crosstalk Characteristics of Picosecond Pulses in a Dual-Plane Coupled Microstrip Lines Structure." 1993 Microwave and Guided Wave Letters 3.8 (Aug. 1993 [MGWL]): 273-275.

Investigation of the propagation and crosstalk of ultrashort electrical pulses in a dual-plane coupled microstrip lines structure is reported. The current distributions and propagation constants of the dominant c- and pi- modes are calculated by using the spectral domain method, and the full-wave analysis results obtained are incorporated into a FFT algorithm to study pulse distortion and crosstalk in the transmission lines. Computer simulation results reveal the superior low-distortion, low-crosstalk characteristics of this transmission line structure, which can be used as interconnects in high-density, high-speed integrated circuits.

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