

Abstracts

High-Speed Pulse Transmission Along a Slow-Wave CPW for Monolithic Microwave Integrated Circuits

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High-speed pulse transmission along a coplanar waveguide (CPW) integrated on a monolithic microwave integrated circuit (MMIC) is analyzed. The time-domain waveform is obtained by the inverse discrete Fourier transform (IDFT) of the frequency-domain data, namely, complex characteristic impedance and propagation constant. The full-wave mode-matching method (MMM) is employed to analyze the dispersion of the CPW. A simple wide-band matching scheme is found to be effective to make the slow-wave CPW a viable circuit element in applications such as a delay line or an interconnection line.

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