Abstracts

Al-SiO/sub 2/-Al Sandwich Microstrip Lines for High-Frequency On-Chip Interconnects

J. Gondermann, E.G. Stein von Kamienski, H.G. Roskos and H. Kurz. "Al-SiO/sub 2/-Al Sandwich Microstrip Lines for High-Frequency On-Chip Interconnects." 1993 Transactions on Microwave Theory and Techniques 41.11 (Dec. 1993 [T-MTT] (1993 Symposium Issue)): 2087-2091.

We present details on the high-frequency behavior of a downscaled 2 µm wide microstrip line, fabricated with both signal and ground conductors on top of the substrate. A significantly reduced geometric dispersion for electric pulses with a bandwidth of several hundred gigahertz is found in time-resolved electrooptic sampling measurements. Additionally, the strong confinement of the electric field within these surface-mounted microstrip lines promises low substrate losses, even on doped substrates, and reduced crosstalk.

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