Abstracts

Voltage Amplitude and Voltage Phase Mapping Within Sub-µm Devices by High Frequency Scanning Force Microscopy

A. Leyk, C. Bohm and E. Kubalek. "Voltage Amplitude and Voltage Phase Mapping Within Sub-µm Devices by High Frequency Scanning Force Microscopy." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1525-1528.

For detailed failure analysis of monolithic microwave integrated circuits (MMIC), device internal test systems, featuring simultaneously high spatial resolution, GHz voltage measurement ability and topographic imaging, must be used. Scanning force microscope testing proofed suitable, but former microwave measurements within sub micron devices focused on point measurements, only. Now we present for the first time mappings of sub micron device internal MMIC signals at 8 GHz on 500 nm structures. A spatial resolution of 80 nm is achieved.

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