Abstracts

General accuracy considerations of microwave on-wafer silicon device measurements

T.E. Kolding. "General accuracy considerations of microwave on-wafer silicon device measurements." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1839-1842.

This paper gives a general treatment of problems encountered when conducting microwave on-wafer measurements on devices fabricated on silicon substrates. First, issues specific to low-resistivity substrates and low-conductance metallization are detailed. This treatment includes probing reliability, contact resistance, leakage effects, and substrate coupling. Next, some widely disputed subjects of on-wafer measurements are assessed and novel techniques for verifying measuring accuracy are proposed.

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