Abstracts

A calibration procedure for W-band on-wafer testing

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This paper describes a W-band (75/spl sim/110 GHz) on-wafer probing calibration procedure based on the microstrip SOLT calibration technique. Two on-wafer offset-open microstrips are used together with SOLT standards to generate high frequency calibration kits. For microstrip-line calibration on 2-mil thick GaAs substrate, measurements of some passive elements are presented and compared with those measured by a multiline TRL calibration. Electromagnetic simulations of these calibration and test standards are also generated. Close agreement between measurements and computer simulation provides verification in high frequency range (75/spl sim/110 GHz). Measurements using this calibration kit from 1 to 65 GHz are also checked against previously reported data. It is found that this SOLT calibration standard set is valid from 1 to 110 GHz.

❑ Return to main document.