Abstracts

Comparison of Active Versus Passive On-Wafer Load-Pull Characterisation of Microwave and MM-Wave Power Devices

J.-E. Muller and B. Gyselinckx. "Comparison of Active Versus Passive On-Wafer Load-Pull Characterisation of Microwave and MM-Wave Power Devices." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 1077-1080.

On-wafer load-pull measurements using passive or active loads help to speed up the power transistor and power MMIC development. The characteristics of various types of loads are compared with respect to simple adjustment and range of load reflection coefficients, dynamic power range limitations and oscillations problems. In case of the active load a perturbation analysis is used for reducing inherent problem areas. To an existing passive on-wafer load-pull measurement setup a feedback type active load was additionally implemented. Because of its simpler operation the passive load is used whenever its tuning range is sufficient. If not, it is substituted by an active load allowing complete coverage of the Smith Chart.

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