Abstracts

Automated characterization of HF power transistors by source-pull and multiharmonic load-pull measurements based on six-port techniques

G. Berghoff, E. Bergault, B. Huyart and L. Jallet. "Automated characterization of HF power transistors by source-pull and multiharmonic load-pull measurements based on six-port techniques." 1998 Transactions on Microwave Theory and Techniques 46.12 (Dec. 1998, Part I [T-MTT]): 2068-2073.

An original measurement system for nonlinear microwave power-transistor characterization using six-port reflectometers is presented. It allows independent active tuning of the output impedances at f/sub 0/ and 2f/sub 0/ (multiharmonic load-pull) and variation of the source impedance at the input port at f/sub 0/ (source-pull). An appropriate search algorithm enables automatic optimization of the output impedances and leads to fast user-friendly operation of the system. Experimental results are shown for a commercial GaAs MESFET power transistor at f/sub 0/=2 GHz.

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