Abstracts

Precision Pulsed I-V System for Accurate GaAs Device I-V Plane Characterization

S. Pritchett, R. Stewart, J. Mason, G. Brehm and D. Christie. "Precision Pulsed I-V System for Accurate GaAs Device I-V Plane Characterization." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1353-1356.

A precision on-wafer VXI-based pulsed I-V measurement system capable of rapid device characterization is presented. This system was developed for I-V plane characterization of GaAs FETs, HBTs, and diodes up to 100 volts. The pulsed I-V system is capable of pulsewidths under 200 nanoseconds with absolute current and voltage uncertainties less than 2.5 percent over greater than 110 dB of dynamic range. Measurement throughput is under 250 ms per I-V point. Accuracies are achieved by applying "dc voltage substitution" calibration to a novel pulser/sense instrument configuration.

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