atv
AutomatisierungsTechnik Voigt GmbH

PIV 1002

Pulsed IV-Measurement Unit

FEATURES & BENEFITS

- Maximum drain voltage/current: 1100 V / 1 A
- Pulse width: 250 ns - 5 ms
- ICCAP driver
- 2-4 Terminal devices
- Reliability test (HCI)
- Bulk current measurement
- P and N-MOSFET, as well as depletion MOSFET / 2 pin devices
- Overcurrent protection switch (needle protection)

PIV 1002 is a laboratory system for the characterization of high-voltage MOSFET. The system is designed to be carried out on MOSFET pulsed measurements at high voltages and currents. As a result, characteristic curves are recorded without overloading the device thermally.

For measuring an internal capacitor is charged with a high voltage SMU, which provides the necessary drain current for the pulse duration. During the pulse output, the gate-pulse voltage and the drain current become high bandwidth scanned and represented by integrated oscilloscopes. This allows a detailed analysis of the pulse shape and thermal effects on the component.

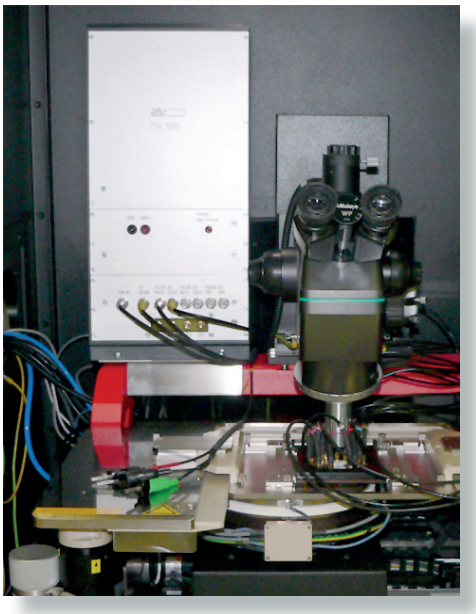
Operating modes

Constant pulse width

The gate voltage is changed with the outer measuring loop. The measured drain-source voltage is changed with the inner loop. Hence, performance diagrams can be generated with very small pulse widths and smallest thermal loads.

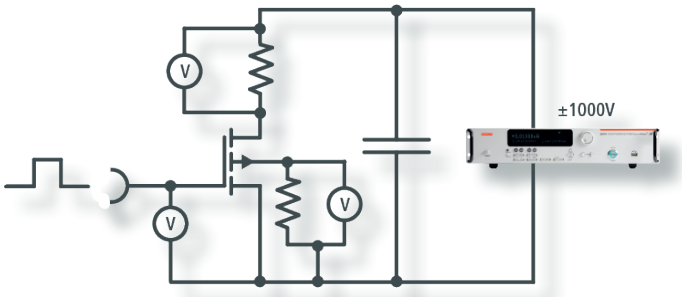
Constant gate voltage

The pulse width is changed with the outer measuring loop. The drain voltage is changed with the inner loop. This allows for examining the thermal drift behavior of the device.

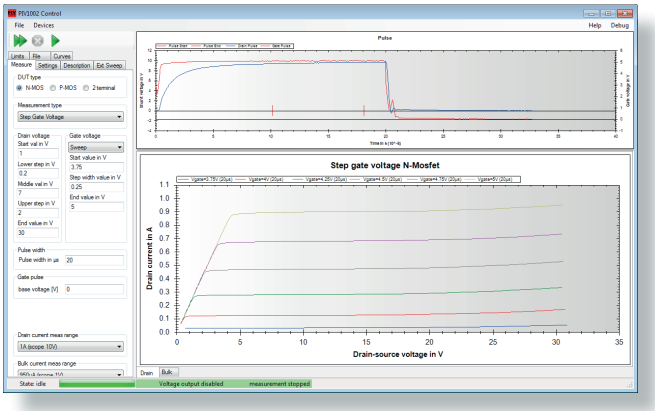


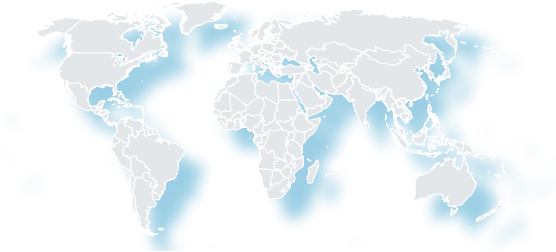
PIV 1002 setup

Measuring outline



P-N Depletion





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