

STS8760 Static Parameter Power Semiconductor Test System

NEW



Features

- Output voltage up to 3000 V
- Output current up to 2400 A
- Pulse length down to 100 μ s
- Accuracy down to pA-resolution
- Optimized for high speed production testing
- Test system comes with ready-to-run test sequencing software
- High speed instrument interfacing
- Reduced thermal effects on DUT and cabling
- Very low noise level due to isolated measurement technology along with high side measurements
- Zero-leakage current technology and highest precision due to complete guarding

System Overview

The VX Instruments Static Parameter Power Semiconductor Test System STS8760 is specifically designed for testing the complete range of medium power to high power semiconductor components like DIODEs, MOSFETs or IGBTs, from low voltage to high voltage DUTs. It provides all instruments to perform all tests of static semiconductor parameters. The integrated PXI platform and open interfacing provides extension capabilities for additional testing requirements like DUT specific resistors-networks or temperature sensors.

Target DUTs

- IGBTs
- MOSFETs (SiC & GaN)
- DIODEs
- Customer or DUT specific test requirements



Test Levels

- Molded module level e.g. TO-, SOT and other IPC or custom packages
- DCB level
- Waver level / bare die

Testing Capability

- MOSFET
 $R_{DS(ON)}$, DS-leakage, GS-leakage, DS-breakdown voltage, etc. according to IEC60747-8
- IGBT
CE-ON volt, CE-leakage, GE-leakage, CE-breakdown voltage, etc. according to IEC60747-9
- Easy test sequence programming with GTS test sequencing software and GTB Test Builder
- Open to all available test sequencers on the market
- Customer defined tests are easy to implement due to open C-DLL API for all instruments e.g. Source Measurement Units and Matrix

Key Features

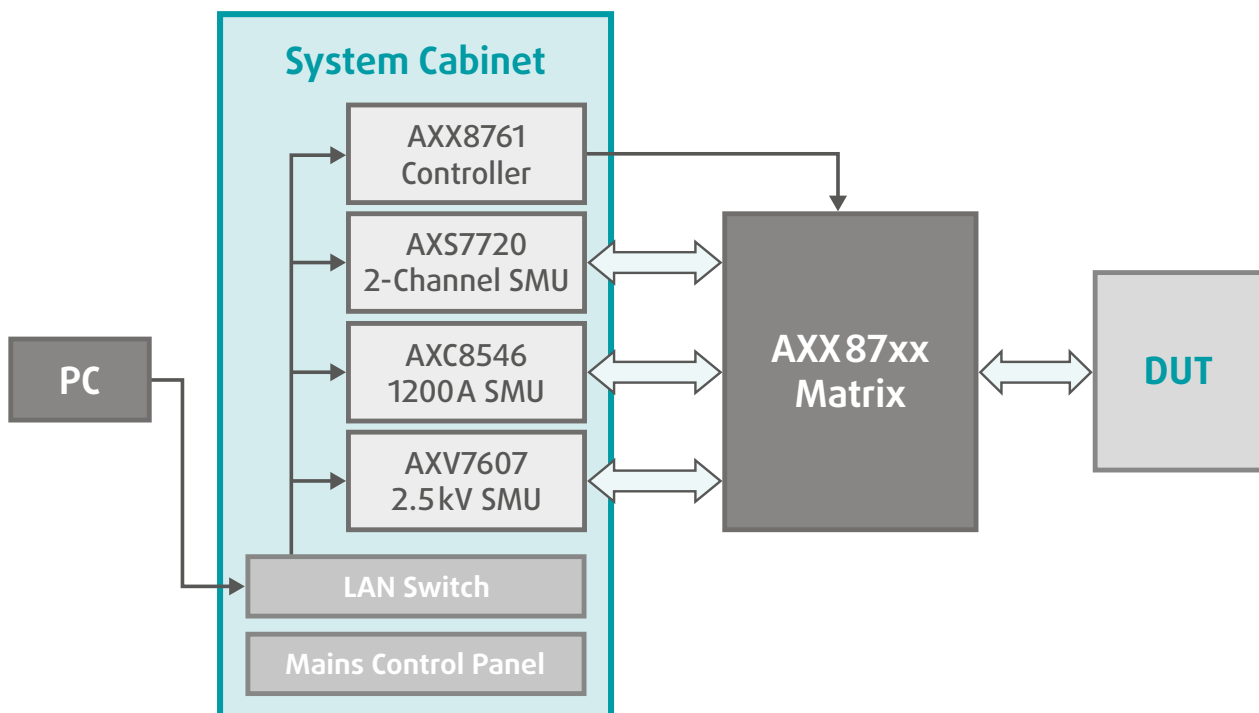
- Complete guarding: reduced leakage and higher precision
- Sensing to DUT: low noise levels
- Short test times due to very short pulsed currents up to 2 400 A, 100 μ s
- Short test times due to high speed switching matrix design
- Low power consumption, reduced thermal effects on DUT and contacting
- Isolated measurement units allowing high side measurements with enormous precision

Additional Features

- Multisite and Multistation test capability
- Low parasitic inductance from instruments to the DUT
- Separate Source Measurement Units for specific purposes (high currents, high voltages)
- Expandable measurement equipment options via PXI
- Optional Insulation test
- Optional dynamic parameter test available like e.g. avalanche, multi pulse or short circuit tests

Schematic Overview

Example Configuration



Test System Main Components

Example Configuration



AXC8546 High Current SMU

- Output current up to 2400 A pulse mode
- Programmable output voltage up to 50V
- Pulse width starting at 300 μ s
- Extremely low noise with linear output stage
- Current generator unit with 4 ranges
- Integrated current measurement unit with 4 measuring ranges
- Integrated differential voltage measurement unit with 3 measuring ranges
- Front touch display available
- Hardware trigger I/O available
- Integrated LAN interface
- Further interfaces on request

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AXS7720 Multi Channel SMU

- Extreme low noise with linear output stage
- Fully isolated design, isolated input and outputs
- Fast measurement of current in nA range
- Especially designed for automatic test equipment and high throughput testing
- Fast rise and fall times due to integrated sink capability
- Integrated matrix and digital I/Os
- Auto sensing

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AXV7607 High Voltage SMU

- Extreme low noise with linear output stage
- Output voltage from -1500V up to 2500V
- Very fast rise and fall times
- Output current in pulse mode max \pm 30 mA
- Output current in continuous mode max \pm 8 mA
- Integrated voltage measurement unit
- Integrated current measurement unit
- Integrated voltage monitor
- Integrated current monitor

[Link to Product Page ↗](#)



AXX8762 Switching Matrix

- Up to 24 IGBT/MOSFETs per DUT
- High Current design up to 2400 A
- Zero-leakage technology due to complete guarding up to the prober
- High flexibility through individually configurable matrix cards
- Custom design of matrix cards

For further information please contact sales@vxinstruments.com ↗