

Precise and Efficient Probe Stations Integrating PZ2100 Series SMUs and PW9251A Software

Keysight Technologies and MSTECH



A Turnkey Solution for On-Wafer Tests

MSTECH's on-wafer probe station, the MST3000A, seamlessly integrates with Keysight's PZ2100 series SMUs to offer a comprehensive solution for advanced testing environments across various applications. The PZ2100 series supports performance up to 210 V, 3.5 A DC, and 10.5 A pulse with flexible SMU module configurations, making it ideal for testing a wide range of devices, from low-power components to high-power modules. The MST3000A supports specialized probes tailored to each PZ2100 SMU module, ensuring fast and precise data acquisition and analysis, and delivering reliable test results with low noise and high repeatability.

This integrated solution excels in various areas, including the electrical characterization of nanoscale devices, the evaluation of semiconductor material properties, MEMS device performance testing, the electrical assessment of next-generation display materials, and foundational research for quantum computing devices. By enhancing accuracy and efficiency, this solution meets the advanced testing requirements of today's technology landscape.

High accuracy and high reliability with one box

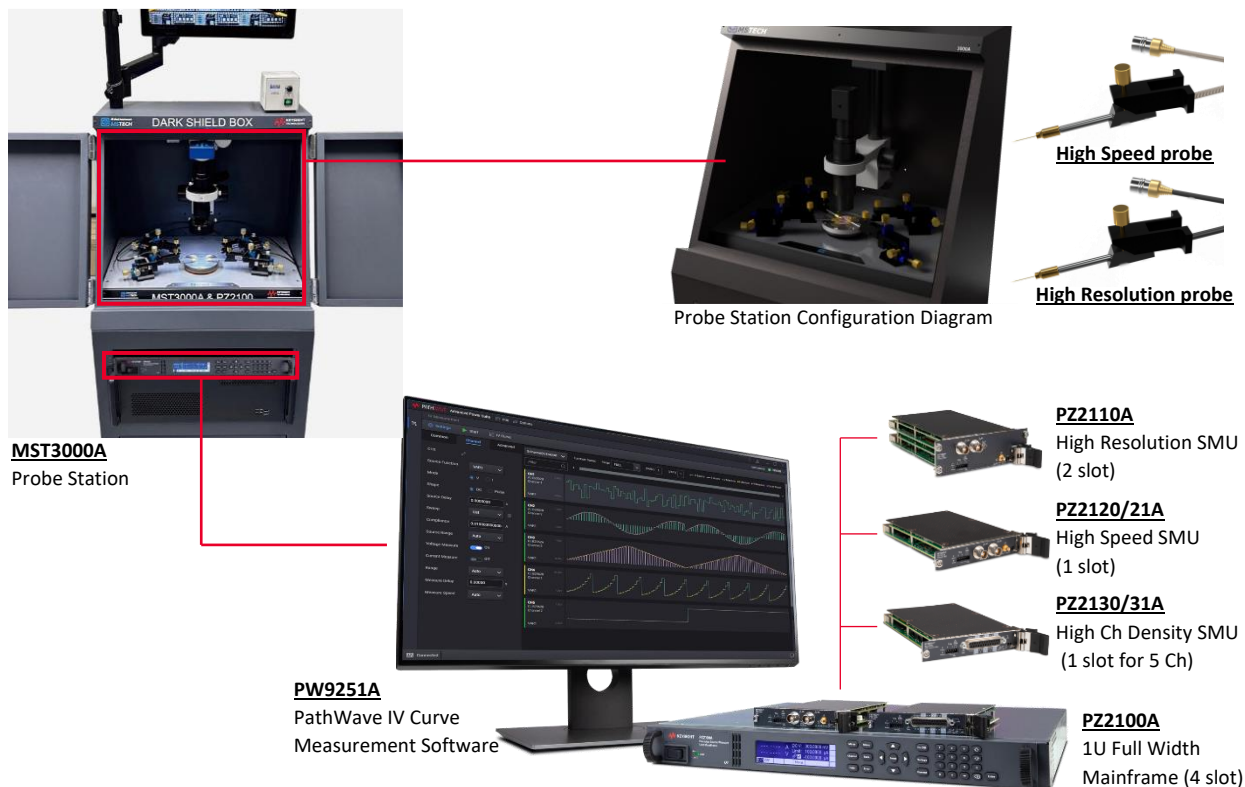
The MST3000A with the PZ2100 SMUs is a state-of-the-art measurement system designed for precision and reliability. It offers outstanding performance for low leakage current measurements, achieving sensitivity down to 10 fA. Equipped with a 1 μ m resolution stage, a high-resolution camera, and precise temperature control, the MST3000A ensures reliable testing even in the most challenging conditions.

Stable and consistent measurement environment with space-saving design

The MST3000A features a vibration-isolated table and a dark shield box, minimizing external interference. The PZ2100A, a compact 1U mainframe, integrates SMUs with a pulser and digitizer, eliminating the need for additional instruments and saving space. These components together ensure a stable and consistent measurement environment. Its compact design and intuitive interface make it suitable for both laboratory and production settings. Additionally, its compatibility with a wide range of equipment enhances operational flexibility, making it ideal for diverse testing requirements.

Streamlining measurement for enhanced productivity

Keysight's PathWave IV Curve Measurement software complements the hardware by enabling seamless and synchronous current-voltage (IV) measurements without programming. The software provides quick and easy analysis of test results through both graphical and tabular views, accelerating research, development, and design verification, thereby collectively enhancing productivity and testing process.



PZ2100 Series SMU Key Specification

| SMU Module Type | Model# | Density | V Range | I Range | Min. Resolution | Min. Pulse Width | Digitizing |
|-----------------|---------|--------------|---------|----------------------------|-----------------|------------------|------------|
| High Resolution | PZ2110A | 1 Ch /2 Slot | 210 V | 315 mA | 10 fA | 20 μ s | 1.25 MSa/s |
| High Speed | PZ2120A | 1 Ch /Slot | 60 V | 3.5 A DC (10.5 A Pulse) | 100 fA | 50 μ s | 1 MSa/s |
| | PZ2121A | | | | | 10 μ s | 15 MSa/s |
| High Ch Density | PZ2130A | 5 Ch /Slot | 30 V | 500 mA | 100 pA | NA | NA |
| | PZ2131A | | | (Ch1/2: +750 mA *) | 10 pA | 100 μ s | 500 kSa/s |

*1. Ch1 and Ch2 expand the maximum current to +750 mA by over range capability.

- MSTECH is a Keysight Solution Partner.
- To learn more about this solution, go to [MSTECH Website](#) for the MST3000A and [Keysight Website](#) for the PZ2100 series.
- Interested in becoming a Keysight Solution Partner? Submit the [form](#) to join!

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