

Product Datasheet - Technical Specifications



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PZ2120A and PZ2121A Precision Source/Measure Unit

Precision SMU Modules for PZ2100A SMU Mainframe

High-Speed SMU Enabling Best-In-Class Dynamic/Pulsed Measurements with a Narrow Pulse Down to 10 μ S at a Fast-Sampling Rate of up to 15 MSa/s for a Wide Range of Emerging Applications

Key features

- Best-in-industry narrow pulse down to 10 µs pulse width
- Best-in-industry fast Digitizer Mode with 15 MSa/s sampling rate
- Wide output range up to 60 V/3.5 A DC/10.5 A pulse
- Wide dynamic range for dynamic measurement with seamless current measurement ranging
- Fast transient with 3.5 V/ μ s slew rate at maximum



Typical applications

- Optical devices (laser diodes, photodiodes, LEDs, etc.)
- Vertical cavity surface emitting laser (VCSEL) sensors/modules
- Integrated circuit (IC) design verification tests/function tests (RF PA/FEM, analog ICs, RFICs, MMICs, etc.)

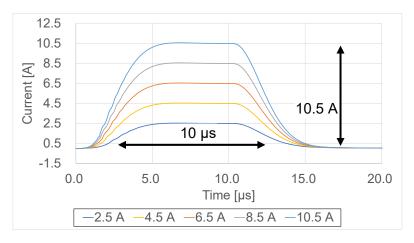


Figure 1. 10 µs Current Pulse Output measured with Digitizer Mode at 15 MSa/s

Key specifications and characteristics

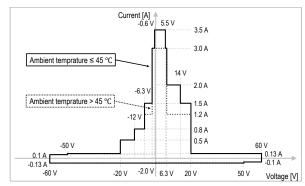
| | | PZ2120A | PZ2121A | | |
|-----------------------|----------------------|------------------|---------|--|--|
| Number of channels | | 1 | | | |
| Number of slots | | 1 | | | |
| Output range | Max. voltage | 60 V | | | |
| | Max. current (DC) | 3.5 A | | | |
| | Max. current (Pulse) | 10.5 A | PZ2121A | | |
| Resolution | Min. voltage | 6 µV | | | |
| | Min. current | 100 fA | | | |
| Current measurement r | noise RMS(1 PLC) | 400 fArms | | | |
| Voltage source noise | RMS (20 MHz) | < 3.5 mVrms | | | |
| | RMS (200 MHz) | < 6 mVrms | | | |
| Min. pulse width | | 50 µs | 10 µs | | |
| Max. slew rate | | 3.5 V/µs | | | |
| Digitizer mode | | Yes | | | |
| Max. sampling rate | | 1 MSa/s 15 MSa/s | | | |
| Auto measurement rang | ging | Yes | | | |
| Seamless current meas | urement ranging | Yes | | | |

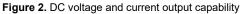
PathWave IV Curve software

PathWave IV Curve software enables the PZ2100A series SMU solution to accelerate research, development, and design verification by executing synchronous current-voltage (IV) measurements on up to 20 channel SMUs in a mainframe, immediately reviewing test results on graphs and tables and efficiently generating reports without programming.

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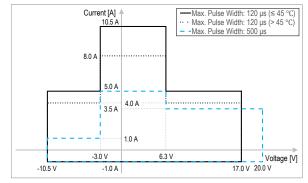


Figure 3. Pulsed voltage and current output capability

PZ2100 High Channel Density Precision SMU Solution



