

# PZ2110A Precision Source/Measure Unit

Precision SMU Modules for PZ2100A SMU Mainframe

## Precision SMU Expanding Precise Static DC Measurements with the Best-In-Class 10 fA Resolution to Fast Dynamic Measurements at a 1.25 MSa/s Sampling Rate

### Key features

- 10 fA resolution with 30 fArms measurement noise (1 PLC)
- Narrow pulse down to 20  $\mu$ s pulse width
- Fast Digitizer Mode with sampling rate up to 1.25 MSa/s
- Fast transient with 1.4 V/ $\mu$ s slew rate at max.



### Typical applications

- Quantum computing (superconducting, trapped ions, silicon-based, etc.)
- Semiconductor devices (FETs, diodes, transistors, etc.)
- Passive component devices (resistors, varistors, capacitors, etc.)
- Silicon photonics

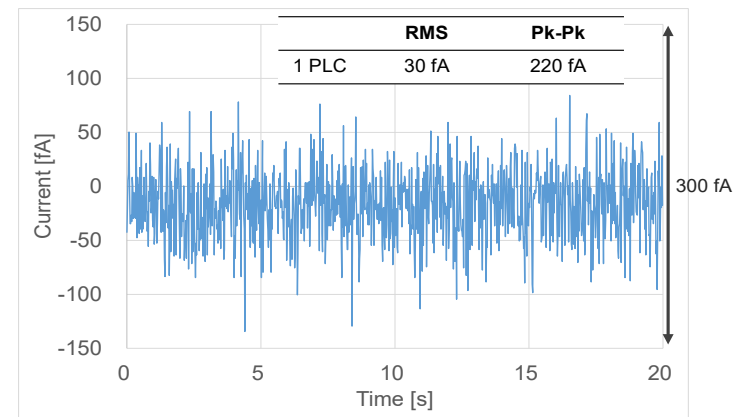


Figure 1. Measurement noise, 10 nA range, no load, 0 V, triax cable (3 m)

More Information: [www.keysight.com/find/pz2110a](http://www.keysight.com/find/pz2110a)

## Key specifications and characteristics

		PZ2120A
Number of channels		1
Number of slots		2
Output range	Max. voltage	210 V
	315 mA	315 mA
	315 mA	315 mA
Resolution	500 nV	500 nV
	10 fA	10 fA
Current measurement noise RMS(1 PLC)		30 fArms
Voltage source noise	RMS (20 MHz)	< 3 mVrms
	RMS (200 MHz)	< 5 mVrms
Min. pulse width		20 $\mu$ s
Max. slew rate		1.4 V/ $\mu$ s
Digitizer mode		Yes
Max. sampling rate		1.25 MSa/s
Auto measurement ranging		Yes
Seamless current measurement ranging		No

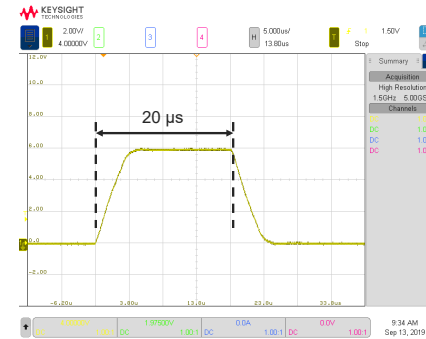


Figure 2. Narrow pulse down to 20  $\mu$ s enables you to suppress the self-heat effect to reveal the true characteristics of the devices

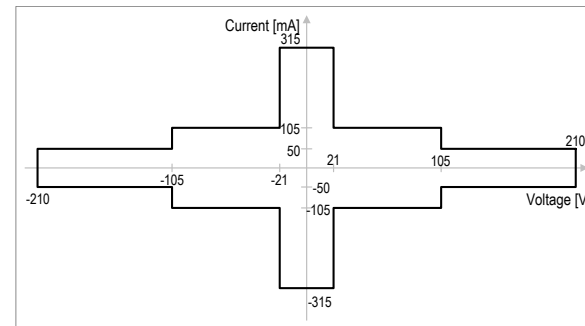
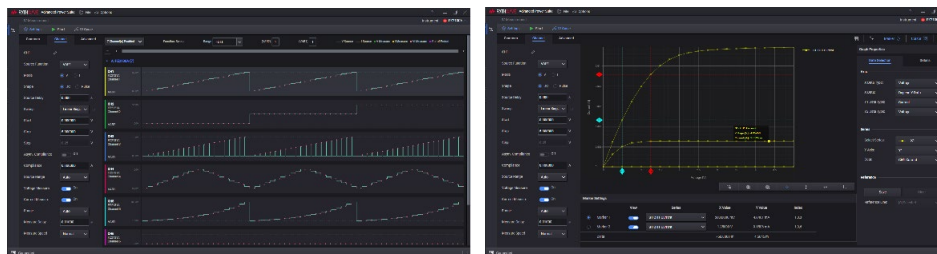


Figure 3. DC voltage and current output capability

## 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.



## PZ2100 High Channel Density Precision SMU Solution



Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at [www.keysight.com](http://www.keysight.com).