

**Aumictech**

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Data Sheet

August 13, 2026

KEITHLEY

Keithley 4220-PGU High Voltage Pulse Generator Unit

The Keithley 4220-PGU High Voltage Pulse Generator Unit is a specialized instrument designed for generating high-voltage pulses. It provides precise control over pulse parameters, making it suitable for various applications such as semiconductor characterization, materials research, and high-energy physics experiments. The unit offers programmable voltage levels, pulse widths, and repetition rates, ensuring flexibility and accuracy in pulse generation.



MODEL

Keithley 4220-PGU

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

4220-PGU

LISTING

<https://aumictechlabs.com/products/4220-pgu-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keithley 4220-PGU High Voltage Pulse Generator Unit is a modular expansion card for the 4200A-SCS Parameter Analyzer that delivers precise, high-speed voltage pulse generation for semiconductor device and materials characterization. This dual-channel pulse source generates programmable voltage pulses from 100 mV to 40 V with minimum pulse widths of 20 ns, supporting both standard 2-level pulses and complex multi-level SegmentARB waveforms with up to 2048 unique segments. The unit is a voltage-sourcing alternative to the 4225-PMU Ultra-Fast Pulse Measure Unit, optimized for applications requiring accurate transient and dynamic device

analysis without integrated measurement capability. Technical Specifications Pulse Output Characteristics Voltage ranges: 10 V (high impedance), 5 V (50 Ω); 40 V (high impedance), 20 V (50 Ω); configurable ± 40 V (80 Vp-p) Pulse amplitude: 100 mV to 40 V programmable Minimum pulse width: 20 ns (recommended minimums vary by range - 770 ns for 40 V range) Pulse period: 20 ns to 1 s programmable Waveform modes: Standard pulse, SegmentARB (up to 2048 segments), Full ARB Triggering: Continuous, burst, or trig burst modes Output isolation via High Endurance Output Relay (HEOR) for high-speed switching Output Connectivity Dual triaxial, 5-way binding post terminals Supplied with CA-404B SMA-to-SMA 50 Ω cables (2 m) and 4200-PRB-C SMA-to-SSMC Y-Cable assemblies (15 cm) Key Features Two independent pulse generation channels Nanosecond-level pulse width resolution Multi-level arbitrary waveform generation via SegmentARB High-speed, high-volume output switching via HEOR Direct integration into 4200A-SCS mainframe module slots Compatibility & Integration Installs directly into designated module slots (Module 9, Module 7, Module 6) of the Keithley 4200A-SCS Parameter Analyzer mainframe, enabling seamless integration with complementary measurement modules and parametric test workflows.

Features & description

From manufacturer datasheet

Features

- Voltage-only (use 4225-PMU when measure is required)

4220PGU Characteristics / Specifications

PARAMETER	VALUE
Model	4220-PGU
Manufacturer	Keithley / Tektronix
Instrument Type	Dual channel high voltage pulse generator unit
Alias	4220-PGU
Host	4200-SCS / 4200A-SCS instrument slot
Channels	2
Measure	none (voltage source only)
Ten volt Vout into 1 Mohm	-10 V to +10 V
Ten volt Vout into 50 ohm	-5 V to +5 V
Forty volt Vout into 1 Mohm	-40 V to +40 V
Forty volt Vout into 50 ohm	-20 V to +20 V
Level accuracy 10 V range	$\pm(0.5\% + 10 \text{ mV})$
Level accuracy 40 V range	$\pm(0.2\% + 20 \text{ mV})$
Resolution into 50 ohm 10 V	less than 250 μV
Resolution into 1 Mohm 10 V	less than 0.5 mV
Overshoot into 50 ohm 10 V	$\pm(3\% + 20 \text{ mV})$
Source impedance	50 ohm nominal
Short circuit current 10 V	$\pm 200 \text{ mA}$
Short circuit current 40 V	$\pm 800 \text{ mA}$
Period range 10 V source only	20 ns to 1 s
Period accuracy	$\pm 1\%$
Pulse width 10 V source only	10 ns to (period - 10 ns)
Output connectors	SMA
Cables supplied	four 2 m SMA; two SMA-to-SSMCYassemblies
Segment ARB depth	2048 segments class (PGU/PMU)

PARAMETER	VALUE
Full ARB	supported
HEOR minimum segment	25 us class (PGU/PMU)
Cal conditions	23 C $\pm$ 5 C, within one year, 5% to 60% RH, 30 minute warm-up
Related 4225 PMU	same pulse plus ultra-fast I-V measure
Related 4205 PG	earlier dual PG card, 50 MHz high-speed mode
Related 4225 RPM	remote amp/switch for PMU, not for PGU measure ranges Notes Specs from Keithley 4200-SCS technical data book 4225-PMU/4220-PGU tables. PGU does not add RPM current ranges. Confirm 10 V versus 40 V range when citing rise time and minimum pulse width.
Rise Time	and minimum pulse width.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Ten volt Vout into 1 Mohm	-10 V to +10 V
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Specifications	
PARAMETER	VALUE
Forty volt Vout into 1 Mohm	-40 V to +40 V
Forty volt Vout into 50 ohm	-20 V to +20 V
Level accuracy 10 V range	$\pm(0.5\% + 10\text{ mV})$
Specifications	
PARAMETER	VALUE
Level accuracy 40 V range	$\pm(0.2\% + 20\text{ mV})$
Resolution into 50 ohm 10 V	less than 250 μV
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Specifications

PARAMETER	VALUE
Overshoot into 50 ohm 10 V	$\pm(3\% + 20\text{ mV})$
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Short circuit current 40 V	$\pm 800\text{ mA}$
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Period accuracy	$\pm 1\%$

Specifications

PARAMETER	VALUE
Pulse width 10 V source only	10 ns to (period - 10 ns)
Output connectors	SMA
Cables supplied	four 2 m SMA; two SMA-to-SSMCYassemblies

Specifications

PARAMETER	VALUE
Segment ARB depth	2048 segments class (PGU/PMU)
Full ARB	supported
HEOR minimum segment	25 us class (PGU/PMU)

Specifications

PARAMETER	VALUE
Cal conditions	23 C ± 5 C, within one year, 5% to 60% RH, 30 minute warm-up
Related 4225 PMU	same pulse plus ultra-fast I-V measure
Related 4205 PG2	earlier dual PG card, 50 MHz high-speed mode

Related 4225 RPM: remote amp/switch for PMU, not for PGU measure ranges

Notes

Specs from Keithley 4200-SCS technical data book 4225-PMU/4220-PGU tables. PGU does not add RPM current ranges. Confirm 10 V versus 40 V range when citing rise time and minimum pulse width.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.