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Data Sheet

August 13, 2026

KEITHLEY

Keithley 4205-PG2 Dual Channel Pulse Generator

The Keithley 4205-PG2 is a dual-channel pulse generator designed for precision timing and control in a variety of testing and research applications. It offers independent control over pulse width, amplitude, and delay for each channel. This pulse generator is ideal for semiconductor characterization, material science, and other applications needing accurate pulse generation.



MODEL

Keithley 4205-PG2

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

4205-PG2

LISTING

<https://aumictechlabs.com/products/4205-pg2-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keithley 4205-PG2 is a dual-channel pulse generator designed for precision pulse generation in semiconductor characterization, materials science research, and electronic system validation. It delivers independent control over two pulse channels with adjustable width, amplitude, and delay, enabling complex waveform sequences and asynchronous pulse timing. Built for engineers requiring granular command over dynamic test conditions, the instrument supports internal and external triggering with channel synchronization capabilities. Technical Specifications Pulse Generation 2 independent pulse generation channels Continuously variable pulse width with independent delay control per channel Adjustable pulse amplitude for fine-tuned signal strength Configurable pulse repetition frequencies across a specified range Defined rise and fall times for signal integrity in fast-switching device characterization Output & Interfacing Specified output

impedance for signal matching and reflection minimization Positive and negative output voltage level capability Maximum current drive per channel Control & Synchronization Independent settings for pulse width, amplitude, and delay on each channel Internal triggering based on programmed timing parameters External trigger input compatibility with defined input levels and signal types Synchronization output provision for instrument coordination Channel synchronization and desynchronization modes

Key Features Dual independent channels enable asynchronous pulse sequences Adjustable output impedance matching reduces signal reflections External trigger capability integrates with multi-instrument test systems Precise rise and fall time control supports characterization of high-speed switching devices

Typical Applications Semiconductor device characterization under dynamic bias conditions Materials science pulsed-excitation research Electronic system validation requiring synchronized multi-channel stimulation Fast-switching device evaluation

Compatibility & Integration The 4205-PG2 accepts external trigger signals and provides synchronization outputs, enabling integration into automated test systems. Output impedance matching and configurable voltage/current levels support direct coupling to a range of device interfaces.

4205PG2 Characteristics / Specifications

PARAMETER	VALUE
Model	4205-PG2
Manufacturer	Keithley Instruments
Instrument Type	Dual channel pulse generator card
Alias	4205-PG2
Host	4200-SCS
Channels	2
High speed frequency	1 Hz to 50 MHz
High voltage frequency	1 Hz to 2 MHz
Timing resolution	10 ns both modes
Jitter RMS period width	0.01% + 200 ps typical
High speed period range	20 ns to 1 s
High voltage period range	500 ns to 1 s
Period accuracy	±1%
High speed pulse width	10 ns to (period - 10 ns)
High voltage pulse width	250 ns to (period - 100 ns)
Pulse width accuracy high speed	±(3% + 200 ps)
Amplitude 50 ohm into 50 ohm high speed	100 mVpp to 10 Vpp
Amplitude 50 ohm into 1 Mohm high speed	200 mVpp to 20 Vpp
Amplitude 50 ohm into 50 ohm high voltage	10 Vpp to 40 Vpp
Amplitude 50 ohm into 1 Mohm high voltage	20 Vpp to 80 Vpp
DC level accuracy high speed	-5.0 V to +5.0 V ±(3% + 50 mV)
DC level accuracy high voltage	-20.0 V to +20.0 V ±(3% + 100 mV)
Source impedance	50 ohm nominal ±0.5%

PARAMETER	VALUE
Short circuit current high speed	±200 mA
Short circuit current high voltage	±800 mA peak
Overshoot high speed	±5% of amplitude ±20 mV
Baseline noise	±(0.1% + 5 mV) rms typical
ARB depth	256k points per channel
ARB timebase	20 ns/point to 1 s/point fixed for the waveform
Segment ARB depth	1024 segments per channel
Segment time	20 ns to 1 s, 10 ns increments
HEOR transition min	100 us class
Output connectors	SMA
Cards per chassis	up to 4 synchronized (8 channels) Notes Specs from Keithley 4205-PG2 dual-channel pulse generator data sheet / 4200-SCS literature. Successor cards are 4220-PGU (voltage) and 4225-PMU (pulse measure). Confirm which PG card is installed in the 4200-SCS chassis.
Waveform libraries	sine, ramp, gaussian, white noise, CSV import

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.

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High speed pulse width	10 ns to (period - 10 ns)
High voltage pulse width	250 ns to (period - 100 ns)

Pulse width accuracy high speed: $\pm(3\% + 200 \text{ ps})$

Amplitude 50 ohm into 50 ohm high speed: 100 mVpp to 10 Vpp

Amplitude 50 ohm into 1 Mohm high speed: 200 mVpp to 20 Vpp

Amplitude 50 ohm into 50 ohm high voltage: 10 Vpp to 40 Vpp

Amplitude 50 ohm into 1 Mohm high voltage: 20 Vpp to 80 Vpp

Specifications

PARAMETER	VALUE
DC level accuracy high speed	-5.0 V to +5.0 V $\pm(3\% + 50 \text{ mV})$
DC level accuracy high voltage	-20.0 V to +20.0 V $\pm(3\% + 100 \text{ mV})$
Source impedance	50 ohm nominal $\pm 0.5\%$

Specifications

PARAMETER	VALUE
Short circuit current high speed	$\pm 200 \text{ mA}$
Short circuit current high voltage	$\pm 800 \text{ mA peak}$
Overshoot high speed	$\pm 5\%$ of amplitude $\pm 20 \text{ mV}$

Specifications

PARAMETER	VALUE
Baseline noise	$\pm(0.1\% + 5 \text{ mV})$ rms typical
ARB depth	256k points per channel
ARB timebase	20 ns/point to 1 s/point fixed for the waveform

Specifications

PARAMETER	VALUE
Segment ARB depth	1024 segments per channel
Segment time	20 ns to 1 s, 10 ns increments
HEOR transition min	100 us class

Output connectors: SMA

Cards per chassis: up to 4 synchronized (8 channels)

Notes

Specs from Keithley 4205-PG2 dual-channel pulse generator data sheet / 4200-SCS literature. Successor cards are 4220-PGU (voltage) and 4225-PMU (pulse measure). Confirm which PG card is installed in the 4200-SCS chassis.

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.