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Data Sheet

August 6, 2026

KEITHLEY

Keithley 4200-SCS Semiconductor Characterization System

The Keithley 4200-SCS is a modular, fully integrated parameter analyzer used for advanced semiconductor device characterization. It provides highly accurate sourcing and measurement capabilities for current-voltage (I-V), capacitance-voltage (C-V), and pulsed measurements. Ideal for research, development, and production testing of semiconductor devices and materials.



MODEL

Keithley 4200-SCS

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

4200-SCS

LISTING

<https://aumictechlabs.com/products/4200-scs-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keithley 4200-SCS is a modular parameter analyzer built for semiconductor device characterization, material analysis, and process development. It delivers DC I-V, C-V, and pulsed measurements with high precision across nine configurable instrument slots. The system runs on an embedded Windows-based PC with KITE software for test definition, execution, data analysis, and reporting. Technical Specifications Source-Measure Units (SMUs) Voltage measurement and sourcing: 1 μ V to 210V Current measurement and sourcing: 0.1 fA to 1A (expandable to 2.6A or 4.4A) Standard resolution: 100 fA; optional 0.1 fA with Remote PreAmp (4200-PA) Medium power (4200-SMU): 2.2W, four-quadrant operation High power (4210-SMU): 22W, four-quadrant

operation Up to nine SMUs per system Pulsed and Transient Measurements Ultra-Fast I-V Module (4225-PMU): 1V/ns slew rate with simultaneous voltage and current measurement Pulse generators (4205-PG2): $\pm 20\text{V}$ output into 50Ω , pulse width down to 10 ns Sampling rate: up to 200 MSa/sec at 5 ns intervals AC Impedance and C-V Multi-Frequency C-V Module (4210-CVU): 1 kHz to 10 MHz Capacitance measurement range: aF to μF Extended frequency support: 10 mHz to 10 Hz (quasi-static) DC bias: $\pm 30\text{V}$ (60V differential); expandable to $\pm 200\text{V}$ (400V differential) with optional packages Digital Oscilloscope Model 4200-SCP2: 8-bit resolution, 2.5 gigasamples/second

Key Features Nine instrument slots for flexible module configuration Four-quadrant source/sink capability across all SMU types Pulsed testing for charge trapping and isothermal applications Wide frequency range from DC through 10 MHz Embedded Windows PC with intuitive KITE software interface

Typical Applications Semiconductor device parameter extraction Process development and characterization Material analysis and research Production testing

Compatibility & Integration The modular architecture accepts medium and high power SMUs, pulsed measurement units, C-V modules, and oscilloscope cards in any combination within the nine available slots.

Features & description

From manufacturer datasheet

Features

- Modular chassis: up to 9 measurement slots
- Medium-power SMU (4200-SMU): ± 210 V / 100 mA; resolution to ~ 100 fA (0.1 fA with PA)
- High-power SMU (4210-SMU): ± 210 V / 1 A
- Basic accuracy class: voltage $\sim 0.01\%$ measure / 0.02% source; current $\sim 0.03\%$ / 0.04%
- Optional 4210-CVU multi-frequency C-V
- Optional pulse I-V / PGU packages (PIV-A/Q class)
- Embedded PC, display, mass storage; GPIB/USB/Ethernet
- Sub-fA resolution with 4200-PA remote preamp
- Resistances well above $10^{12} \Omega$ with preamps

4200SCS Characteristics / Specifications

PARAMETER	VALUE
Model	4200-SCS
Manufacturer	Keithley Instruments (Tektronix)
Instrument Type	Semiconductor Characterization System / Parameter Analyzer
Alias	4200-SCS; Keithley 4200-SCS SMU / System Up to 9 SMUs; ± 210 V; 100 mA or 1 A; optional CVU and pulse Operational Notes
Modular chassis	up to 9 measurement slots
Medium-power SMU (4200-SMU)	± 210 V / 100 mA; resolution to ~ 100 fA (0.1 fA with PA)
High-power SMU (4210-SMU)	± 210 V / 1 A
Basic accuracy class	voltage $\sim 0.01\%$ measure / 0.02% source; current $\sim 0.03\%$ / 0.04%

4200SCS Specifications

PARAMETER	VALUE
Key Features	- Modular chassis: up to 9 measurement slots
Technical Specifications	Model: 4200-SCS
SMU / System	Up to 9 SMUs; ± 210 V; 100 mA or 1 A; optional CVU and pulse
Operational Notes	Prefer Keithley 4200-SCS datasheet. Successor: 4200A-SCS. Confirm installed modules on unit.

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

Specifications

PARAMETER	VALUE
Model	4200-SCS
Manufacturer	Keithley Instruments (Tektronix)
Instrument Type	Semiconductor Characterization System / Parameter Analyzer
Alias	4200-SCS; Keithley 4200-SCS

SMU / System

Up to 9 SMUs; ± 210 V; 100 mA or 1 A; optional CVU and pulse

Operational Notes

Prefer Keithley 4200-SCS datasheet. Successor: 4200A-SCS. Confirm installed modules on unit.

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.