

KEITHLEY

2602B

The Keithley 2602B is a high-performance, dual-channel System SourceMeter SMU Instrument that delivers high speed, precision, and integration capabilities. Equipped with Keithley's Test Script Processor (TSP) technology, the 2602B combines a precision power supply, true current source, 6.5-digit DMM, arbitrary waveform generator, pulse generator, and electronic load into a single, tightly integrated instrument, making it an excellent solution for high-throughput production testing of semiconductors, LEDs, and materials.

SPECIFICATIONS

General

Display	Dual-line vacuum fluorescent display (VFD)
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Physical

Power Supply	100 V to 250 V AC, 50 Hz to 60 Hz (auto-sensing), 250 VA maximum
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Operating Temperature	0°C to 50°C °C
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Dimensions (W×H×D)	213 mm × 89 mm × 460 mm mm
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Weight	5.5 kg kg
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Source Specifications

Number of Channels	2
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Maximum Voltage Output	40 V
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Maximum Current Output	3 A DC, 10 A pulsed
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Maximum Output Power	40.4 W per channel
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Voltage Source Ranges	100 mV, 1 V, 6 V, 40 V
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Voltage Source Programming Resolution	5 µV (on 100 mV range)
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Voltage Source Basic Accuracy	0.02%
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Current Source Ranges	100 nA, 1 µA, 10 µA, 100 µA, 1 mA, 10 mA, 100 mA, 1 A, 3 A, 10 A (pulse only)
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Current Source Programming Resolution	2 pA (on 100 nA range)
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Current Source Basic Accuracy	0.03%
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Overvoltage Protection (OVP) Range	Programmable up to 40 V
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Overcurrent Protection (OCP) Range	Programmable up to 10 A (pulse) or 3 A (DC)
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Measure Specifications

Voltage Measurement Ranges	100 mV, 1 V, 6 V, 40 V
Voltage Measurement Resolution	100 nV (at 6.5 digits, on 100 mV range)
Voltage Measurement Basic Accuracy	0.015%
Current Measurement Ranges	100 nA, 1 µA, 10 µA, 100 µA, 1 mA, 10 mA, 100 mA, 1 A, 3 A, 10 A (pulse only)
Current Measurement Resolution	100 fA (at 6.5 digits, on 100 nA range)
Current Measurement Basic Accuracy	0.02%
Integration Time Range (NPLC)	0.001 to 25 NPLC
Input Impedance	>10 GΩ (on <6V ranges)
Common Mode Voltage Limit	250 V DC

Pulse Mode Specifications

Maximum Peak Pulse Current	10 A
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Sweep & Sequencing Capabilities

Supported Sweep Types	Linear, Logarithmic, List, Custom
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System & Control Specifications

Onboard Scripting Language	Test Script Processor (TSP)
Reading Rate (To Buffer)	20,000 readings per second (at 0.001 NPLC)
Digital I/O Lines	14 lines
Digital I/O Connector	25-pin female D-sub
A/D Converter Resolution	24-bit

Connectivity & Interfaces

USB Ports	1 x USB 2.0 Host (front panel), 1 x USB 2.0 Device Type-B (rear panel)
Safety Interlock	Yes, via digital I/O connector

Power & Environmental

Maximum Power Consumption	250 VA
Storage Temperature Range	-25°C to 65°C
Cooling Method	Forced air cooling (internal fan)
Warm-up Time	2 hours to rated specifications

Physical Characteristics

Form Factor	Bench or 2U, half-rack width rack mount
Rack Mounting Kit Availability	Yes, optional rack mount kits available

Compliance & Certifications

Standard Calibration Interval	1 year
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Sensing

Sensing Modes	2-wire (local) and 4-wire (remote)
Maximum Sense Lead Resistance	1 k Ω

Isolation & Safety

Maximum Voltage LO to Chassis Ground	250 V DC
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Sourcing

Maximum Normal Mode Load Capacitance	10 nF
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High Capacitance Mode

High Capacitance Mode - Maximum Load Capacitance	50 μ F (typical)
High Capacitance Mode - Minimum Load Capacitance	100 nF (typical)

Digital I/O

Digital I/O Maximum Voltage	5.25 V
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Measurement Performance

Ammeter Voltage Burden	< 1 mV
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Source Performance

Voltage Source Transient Recovery Time	< 70 μ s
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Environmental

Maximum Operating Altitude	2000 m
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Power

Power Supply Voltage Range	100 V to 240 V AC
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TECHNOLOGY

Source Measure Unit (SMU)

APPLICATIONS

Semiconductor device characterization, LED and laser diode testing, precision component testing, and material research

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.