

Specifications

Specifications <i>(at 25 °C ± 5 °C unless otherwise specified)</i>	6060B	6063B
DC Input ratings		
Current	0 to 60 A	0 to 10 A
Voltage	3 to 60 V	3 to 240 V
Maximum power (at 40° C)	300 W	250 W
Constant current mode		
Ranges	0 to 6 A, 0 to 60 A	0 to 1 A, 0 to 10 A
Accuracy	0.1% ± 75 mA	0.15% ± 10 mA
Regulation	10 mA	8 mA
Constant voltage mode		
Accuracy	0.1% ± 50 mV	0.12% ± 120 mV
Regulation (w/remote sense)	10 mV	10 mV
Constant resistance mode		
Ranges	0.033 to 1.0 Ω 1 to 1,000 Ω 10 to 10,000 Ω	0.20 to 24.0 Ω 24 to 10,000 Ω 240 to 50,000 Ω
Accuracy	1 Ω: 0.8% ± 8 mΩ (with ≥ 6 A at input) 1 KΩ: 0.3% ± 8 mΩ (with ≥ 6 V at input) 10 KΩ: 0.3% ± 8 mΩ (with ≥ 6 V at input)	24 Ω: 0.8% ± 200 mΩ (with ≥ 1 A at input) 10 KΩ: 0.3% ± 0.3 mΩ (with ≥ 24 V at input) 50 KΩ: 0.3% ± 0.3 mΩ (with ≥ 24 V at input)
Transient generator		
Frequency range	0.25 Hz to 10 kHz	0.25 Hz to 10 kHz
Accuracy	3%	3%
Duty cycle range	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz)	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz)
Accuracy	6% of setting ± 2%	6% of setting ± 2%
Current level high range	0 to 60 A	0 to 10 A
Accuracy	0.1% ± 350 mA	0.18% ± 50 mA
Current level low range	0 to 6 A	0 to 1 A
Accuracy	0.1% ± 80 mA	0.18% ± 13 mA
Voltage level	0 to 60 V	0 to 240 V
Voltage level accuracy	0.1% ± 300 mV	0.15% ± 1.1 V
Readback accuracy		
Current	0.05% ± 65 mA	0.12% ± 10 mA
Voltage	± (0.05% + 45 mV)	± (0.1% + 150 mV)
Ripple and noise (20 Hz to 10 MHz noise)		
Current	4 mA rms 40 mA peak-to-peak	1 mA rms 10 mA peak-to-peak
Voltage	6 mV rms	6 mV rms

Specifications, continued

Supplemental characteristics <i>(Non-warranted characteristics determined by design and useful in applying the product)</i>	6060B	6063B
Constant current mode		
Resolution	60 A range: 16 mA 6 A range: 1.6 mA	10 A range: 2.6 mA 1 A range: 0.26 mA
Temperature coefficient	100 ppm/°C ± 5 mA/°C	150 ppm/°C ± 1 mA/°C
Constant voltage mode		
Resolution	16 mV	64 mV
Temperature coefficient	100 ppm/°C ± 5 mV/°C	120 ppm/°C ± 10 mV/°C
Constant resistance mode		
Resolution	1 Ω : 0.27 mΩ 1 KΩ: 0.27 ms 10 KΩ: 0.027 ms	24 Ω: 6 mΩ 10 KΩ: 0.011 ms 50 KΩ: 0.001 ms
Temperature coefficient	1 Ω: 800 ppm/°C ± 0.4 mΩ/°C 1 KΩ: 300 ppm/°C ± 0.6 ms/°C 10 KΩ: 300 ppm/°C ± 0.6 ms/°C	24 Ω: 800 ppm/°C ± 10 mΩ/°C 10 KΩ: 300 ppm/°C ± 0.03 ms/°C 50 KΩ: 300 ppm/°C ± 0.03 ms/°C
Transient generator		
Frequency range	0.25 Hz to 10 kHz	0.25 Hz to 10 kHz
Resolution	4% or less	4% or less
Duty cycle range	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz)	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz)
Resolution	4%	4%
Current level high range	60 A range:	10 A range:
Resolution	260 mA	43 mA
Current level low range	6 A range:	1 A range:
Resolution	26 mA	4 mA
Current temperature coefficient	100 ppm/°C ± 7 mA/°C	180 ppm/°C ± 1.2 mA/°C
Voltage level resolution	260 mV	1 V
Voltage temperature coefficient	150 ppm/°C ± 5 mV/°C	120 ppm/°C ± 10 mV/°C
Programmable slew rate	60 A range: 1 A/ms to 5 A/μs 6 A range: 0.1 A/ms to 0.5 A/μs	10 A range: 0.17 A/ms to 0.83 A/μs 1 A range: 17 A/ms to 83 A/ms
Rise/fall time	12 μs to 8 ms	16 μs to 8 ms
Analog programming bandwidth	10 kHz (–3 dB frequency)	10 kHz (–3 dB frequency)
Analog programming accuracy		
Current (low range)	4.5% ± 75 mA	3% ± 8 mA
Current (high range)	4.5% ± 250 mA	3% ± 20 mA
Temperature coefficient	100 ppm/°C ± 6 mA/°C	150 ppm/°C ± 1 mA/°C
Voltage	0.8% ± 200 mV	0.5% ± 150 mV
Temperature coefficient	100 ppm/°C ± 1 mV/°C	120 ppm/°C ± 10 mV/°C
Analog programming voltage	0 to 10 V	0 to 10 V
Readback specifications		
Current readback resolution	17 mA (via GPIB) 20 mA (front panel)	2.7 mA (via GPIB) 10 mA (front panel)
Temperature coefficient	50 ppm/°C ± 5 mA/°C	100 ppm/°C ± 1 mA/°C
Voltage readback resolution	17 mV (via GPIB) 20 mV (front panel)	67 mV (via GPIB) 100 mV (front panel)
Temperature coefficient	50 ppm/°C ± 1.2 mV/°C	100 ppm/°C ± 8 mV/°C

Notes:

1. Operating temperature range is 0° to 55 °C. All specifications apply for 25 °C ± 5 °C, except as noted.
2. Maximum continuous power available is derated linearly from 40 °C to 75% of maximum at 55 °C.
3. DC current accuracy specifications apply 30 seconds after input is applied.

Specifications, continued

Supplemental characteristics <i>(Non-warranted characteristics determined by design and useful in applying the product)</i>	6060B	6063B
Analog monitor accuracy		
Current monitor (0 to 10 V _{out})	4% ± 85 mA	3% ± 10 mA
Temperature coefficient	50 ppm/°C ± 6 mA/°C	100 ppm/°C ± 1 mA/°C
Voltage monitor (0 to 10 V _{out})	0.25% ± 40 mV	0.4% ± 240 mV
Temperature coefficient	50 ppm/°C ± 0.2 mV/°C	70 ppm/°C ± 1.2 mV/°C
Remote sensing	5-VDC maximum between sense and load input	5-VDC maximum between sense and load input
Minimum operating voltage (at full rated current)	2 V (1.2 V typical)	2 V (1.2 V typical)
Programmable short	0.033 Ω (0.020 Ω typical)	0.20 Ω (0.10 Ω typical)
Programmable open (typical)	20 kΩ	80 kΩ
Drift (over 8-hour interval)		
Current	0.03% ± 10 mA	0.03% ± 15 mA
Voltage	0.01% ± 10 mV	0.01% ± 20 mV
DC isolation voltage	± 240 VDC, between any input and chassis ground	± 240 VDC, between any input and chassis ground
Digital inputs	V _{IL} = 0.9 V _{max} at I _{IL} = -1 mA / V _{IH} = 3.15 V _{min} (pull-up resistor on input)	V _{IL} = 0.9 V _{max} at I _{IL} = -1 mA / V _{IH} = 3.15 V _{min} (pull-up resistor on input)
Digital outputs	V _{OL} = 0.72 V _{max} at I _{OL} = 1 mA / V _{OH} = 4.4 V _{min} at I _{OH} = -20 μA	V _{OL} = 0.72 V _{max} at I _{OL} = 1 mA / V _{OH} = 4.4 V _{min} at I _{OH} = -20 μA

Notes:

1. Operating temperature range is 0° to 55 °C. All specifications apply for 25 °C ± 5 °C, except as noted.
2. Maximum continuous power available is derated linearly from 40 °C to 75% of maximum at 55 °C.
3. DC current accuracy specifications apply 30 seconds after input is applied.

Supplemental characteristics for all model numbers

Software driver: *VXI|plug&play*

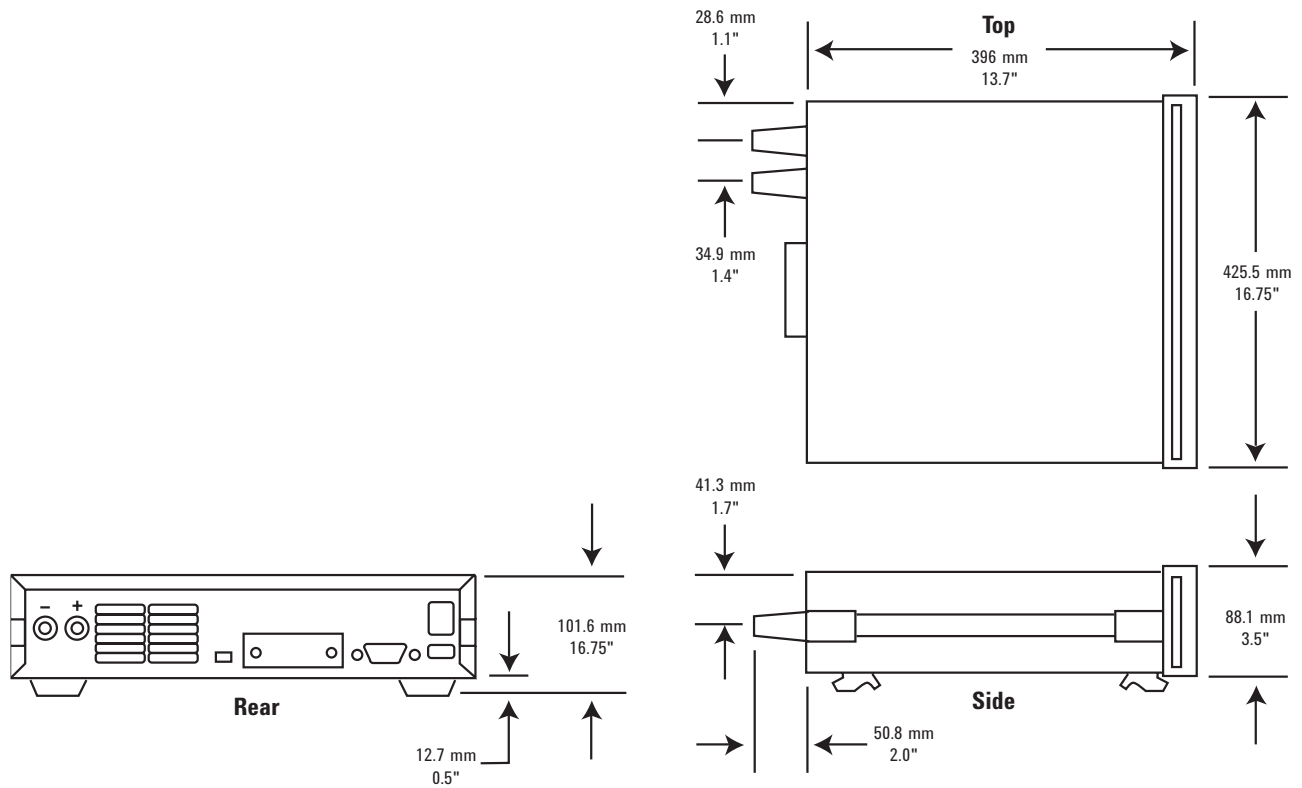
Size:

425.5 mm W x 88.1 mm H x 396 mm D
(16.75 in x 3.5 in x 13.7 in)

Weight: 6.12 kg (13.5 lb) net; 8.16 kg
(18 lb) shipping

Warranty: One year

Agilent models: 6060B, 6063B



Ordering information

The 6060B and 6063B come with full documentation on CD-ROM. The CD-ROM includes operating manual, programming guide, service manual, and application notes.

- Opt 020** Front panel DC input connectors
Opt 100 87 to 106 VAC, 47 to 66 Hz input (for Japan only)
Opt 120 104-127 VAC, 47 to 66 Hz
Opt 220 191 to 233 VAC, 47 to 66 Hz input
Opt 240 209 to 250 VAC, 47 to 66 Hz input
- Opt 0L1** Printed operating manual and programming guide
Opt 0B3 Printed service manual

Accessories

- 1CM002A*** Rack mount flange kit 88.1 mm H (2U) – two flange brackets; 1.75 Inch hole spacing
1CP001A* Rack mount flange and handle kit 88.1 mm H (2U) – two brackets and front handles
E3663AC Support rails for Agilent rack cabinets

Application notes

Agilent AN 372-1 Power Supply Testing, 5952-4190

Agilent AN 372-2 Battery Testing, 5952-4191

Pulsed Characterization of Power Semiconductors Using Electronic Loads (AN 1246) 5091-7636E

* Support rails required



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Product specifications and descriptions in this document subject to change without notice.

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