

### Specifications

Amperes	0 to 60 A	0 to 10 A	0 to 30 A	0 to 120 A	0 to 60 A
Volts	3 to 60 V	3 to 240 V	3 to 60 V	3 to 60 V	3 to 150 V
Maximum power (at 40°C)	300 W	250 W	150 W	600 W	500W
Hewlett-Packard model	HP 6060B, 60502B	HP 6063B, 60503B	HP 60501B	HP 60504B	HP 60507B
Constant current mode Ranges	0 to 6 A, 0 to 60 A	0 to 1 A, 0 to 10 A	0 to 3 A, 0 to 30 A	0 to 12 A, 0 to 120 A	0 to 6 A, 0 to 60 A
Accuracy	0.1% ± 75 mA	0.15% ± 10 mA	0.1% ± 40 mA	0.12% ± 130 mA	0.1% ± 80 mA
Regulation	10 mA	8 mA	10 mA	10 mA	10 mA (w/≥ 3 V at the point)
Constant voltage mode Accuracy	0.1% ± 50 mV	0.12% ± 120 mV	0.1% ± 50 mV	0.1% ± 50 mV	0.1% ± 125 mV
Regulation (w/remote sense)	10 mV	10 mV	5 mV	20 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	0.067 to 2 Ω 2 to 2,000 Ω 20 to 10,000 Ω	0.017 to 0.5 Ω 0.5 to 500 Ω 5 to 5,000 Ω	0.033 to 2.5 Ω 2.5 to 2,500 Ω 25 to 10,000 Ω
Accuracy	1 Ω: 0.8% ± 8 mΩ (with ≥ 6 A at input) 1 KΩ: 0.3% ± 8 mS (with ≥ 6 V at input) 10 KΩ: 0.3% ± 8 mS (with ≥ 6 V at input)	24 Ω: 0.8% ± 200 mΩ (with ≥ 1 A at input) 10 KΩ: 0.3% ± 0.3 mS (with ≥ 24 V at input) 50 KΩ: 0.3% ± 0.3 mS (with ≥ 24 V at input)	2 Ω: 0.8%, ± 16 mΩ (with ≥ 3 A at input) 2 KΩ: 0.3% ± 5 mS (with ≥ 6 V at input) 10 KΩ: 0.3% ± 5 mS (with ≥ 6 V at input)	0.5 Ω: 0.8% ± 5 mΩ (with ≥ 12 A at input) 500 Ω: 0.3% ± 18 mS (with ≥ 6 V at input) 5 KΩ: 0.3% ± 18 mS (with ≥ 6 V at input)	2.5 Ω: 0.8% ± 16 mΩ (with ≥ 6 A at input) 2.5 KΩ: 0.3% ± 5 mS (with ≥ 15 V at input) 10 KΩ: 0.3% ± 5 mS (with ≥ 15 V at input)
Transient generator Frequency range Accuracy	0.25 Hz to 10 kHz 3%	0.25 Hz to 10 kHz 3%	0.25 Hz to 10 kHz 3%	0.25 Hz to 10 kHz 3%	0.25 Hz to 10 kHz 3%
Duty cycle range Accuracy	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 6% of setting ± 2%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 6% of setting ± 2%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 6% of setting ± 2%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 6% of setting ± 2%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 6% of setting ± 2%
Current level high range Accuracy	60-A range: 0.1% ± 350 mA	10-A range: 0.18% ± 50 mA	30-A range: 0.1% ± 200 mA	120-A range: 0.15% ± 700 mA	60-A range: 0.1% ± 350 mA
Current level low range Accuracy	6-A range: 0.1% ± 80 mA	1-A range: 0.18% ± 13 mA	3-A range: 0.1% ± 40 mA	12-A range: 0.15% ± 160 mA	6-A range: 0.1% ± 85 mA
Voltage level	3 to 60 V	3 to 240 V	3 to 60 V	3 to 60 V	3 to 150 V
Voltage level accuracy	0.1% ± 300 mV	0.15% ± 1.1 V	0.1% ± 300 mV	0.15% ± 300 mV	0.15% ± 750 mV
Readback specifications Current readback accuracy	0.05% ± 65 mA	0.12% ± 10 mA	0.06% ± 40 mA	0.1% ± 110 mA	0.1% ± 65 mA
Power readback accuracy	0.2% ± 4 W	0.2% ± 3 W	0.2% ± 2 W	0.2% ± 8 W	0.2% ± 8 W
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	2 mA rms 20 mA peak-to-peak	6 mA rms 60 mA peak-to-peak	4 mA rms 40 mA peak-to-peak
Voltage	6 mV rms	6 mV rms	5 mV rms	8 mV rms	10 mV rms

### Supplemental Characteristics (Nonwarranted characteristics determined by design that are useful in applying the product)

Hewlett-Packard model	HP 6060B, 6052B	HP 6063B, 60503B	HP 60501B	HP 60504B	HP 60507B
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	30-A range: 8 mA 3-A range: 0.8 mA	120-A range: 32 mA 12-A range: 3.2 mA	60-A range: 16 mA 6-A range: 1.6 mA
Temperature coefficient	100 ppm/°C ± 5 mA/°C	150 ppm/°C ± 1 mA/°C	100 ppm/°C ± 3 mA/°C	120 ppm/°C ± 8 mA/°C	120 ppm/°C ± 5 mA/°C
Constant voltage mode Resolution	16 mV	64 mV	16 mV	16 mV	40 mV
Temperature coefficient	100 ppm/°C ± 5 mV/°C	120 ppm/°C ± 10 mV/°C	100 ppm/°C ± 5 mV/°C	100 ppm/°C ± 5 mV/°C	100 ppm/°C ± 5 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	2 Ω: 0.54 mΩ 2 KΩ: 0.14 mS 10 KΩ: 0.014 mS	5 Ω: 0.14 mΩ 500 Ω: 0.54 mS 5 KΩ: 0.054 mS	2.5 Ω: 0.67 mΩ 2.5 KΩ: 0.10 mS 10 KΩ: 0.01 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	2 Ω: 800 ppm/°C ± 0.8 mΩ/°C 2 KΩ: 300 ppm/°C ± 0.5 mS/°C 10 KΩ: 300 ppm/°C ± 0.5 mS/°C	0.5 Ω: 800 ppm/°C ± 0.2 mΩ/°C 500 Ω: 300 ppm/°C ± 1.2 mS/°C 5 KΩ: 300 ppm/°C ± 1.2 mS/°C	2.5 Ω: 800 ppm/°C ± 0.8 mΩ/°C 2.5 KΩ: 300 ppm/°C ± 0.3 mS/°C 10 KΩ: 300 ppm/°C ± 0.3 mS/°C
Transient generator Frequency range Resolution	0.25 Hz to 10 kHz 4% or less	0.25 Hz to 10 kHz 4% or less	0.25 Hz to 10 kHz 4% or less	0.25 Hz to 10 kHz 4% or less	0.25 Hz to 10 kHz 4% or less
Duty cycle range Resolution	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 4%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 4%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 4%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 4%	3 to 97% (0.25 Hz to 1 kHz) 6 to 94% (1 to 10 kHz) 4%
Current level high range Resolution	60-A range: 260 mA	10-A range: 43 mA	30-A range: 130 mA	120-A range: 520 mA	60-A range: 260 mA
Current level low range Resolution	6-A range: 26 mA	1-A range: 4 mA	3-A range: 13 mA	12-A range: 52 mA	6-A range: 26 mA
Current temperature coefficient	100 ppm/°C ± 7 mA/°C	180 ppm/°C ± 1.2 mA/°C	100 ppm/°C ± 5 mA/°C	150 ppm/°C ± 10 mA/°C	150 ppm/°C ± 5 mA/°C
Voltage level resolution	260 mV	1 mV	260 mV	260 mV	650 mV
Voltage temperature coefficient	150 ppm/°C ± 5 mV/°C	120 ppm/°C ± 10 mV/°C	150 ppm/°C ± 5 mV/°C	150 ppm/°C ± 5 mV/°C	150 ppm/°C ± 5 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/μs	30-A range: 0.5 A/ms to 2.5 A/μs 3-A range: 0.05 A/ms to 0.25 A/μs	120-A range: 2 A/ms to 10 A/μs 12-A range: 200 A/ms to 1 A/μs	60-A range: 1 A/ms to 5 A/μs 6-A range: 0.1 A/ms to 0.5 A/μs
Rise/fall time	12 μs to 8 ms	16 μs to 8 ms	12 μs to 8 ms	12 μs to 8 ms	18 μs to 8 ms