

High Performance DC Power Supplies speed and accuracy for test optimization



6551A-6555A

Single-Output 500 W

- Front panel and analog control of output voltage and current
- Fast, low-noise outputs
- Fan-speed control to minimize acoustic noise
- Protection features to ensure DUT safety

This reliable series of 500 W DC power supplies can be controlled either from the front panel or via an analog programming voltage. When used in a test system, the fast up and down programming helps decrease test time. Quickly reacting protection features, including fast crowbar, CV/CC mode crossover and over-voltage protection help protect your valuable assemblies from damage. The linear topology produces very low ripple and noise, which allows you to make extremely accurate measurements of the devices which you are testing.

Lab bench use is enhanced by the fan speed control, which helps to minimize the acoustic noise.

Specifications

(at 0° to 55° C unless otherwise specified)

	6551A	6552A	6553A	6554A	6555A
Number of outputs	1	1	1	1	1
 GPIB	No	No	No	No	No
Output ratings					
Output voltage	0 to 8 V	0 to 20 V	0 to 35 V	0 to 60 V	0 to 120 V
Output current (40° C)	0 to 50 A	0 to 25 A	0 to 15 A	0 to 9 A	0 to 4 A
Maximum current (50° C/55° C)	45 A/42.5 A	22.5 A/21.3 A	13.5 A/12.8 A	8.1 A/7.7 A	3.6 A/3.4 A
Programming accuracy at 25° C ±5° C					
Voltage 0.06% +	5 mV	10 mV	15 mV	26 mV	51 mV
Current 0.15% +	60 mA	25 mA	13 mA	8 mA	4 mA
Ripple and noise from 20 Hz to 20 MHz					
Voltage rms	300 µV	300 µV	400 µV	500 µV	700 µV
peak-peak	3 mV	3 mV	4 mV	5 mV	7 mV
Current rms	25 mA	10 mA	5 mA	3 mA	2 mA
Load regulation					
Voltage	1 mV	2 mV	3 mV	4 mV	5 mV
Current	2 mA	1 mA	0.5 mA	0.5 mA	0.5 mA
Line regulation					
Voltage	0.5 mV	0.5 mV	1 mV	1mV	2 mV
Current	2 mA	1 mA	0.75 mA	0.5 mA	0.5 mA
Transient response time	Less than 100 µs for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV, whichever is greater) following any step change in load current of up to 50% of rated current				

Supplemental Characteristics

(Non-warranted characteristics determined by design and useful in applying the product)

	6551A	6552A	6553A	6554A	6555A
Average resolution					
Voltage	2 mV	5 mV	10 mV	15 mV	30 mV
Current	15 mA	7 mA	4 mA	2.5 mA	1.25 mA
OVP	12 mV	30 mV	54 mV	93 mV	190 mV
OVP accuracy	160 mV	400 mV	700 mV	1.2 V	2.4 V

More detailed specifications at www.agilent.com/find/6550

Single-Output: 500 W (Continued)

Application Notes:

10 Practical Tips You Need to Know About Your Power Products
5965-8239E

Understanding Linear Power Supply Operation
(AN1554)
5989-2291EN

Agilent DC Power Supplies for Base Station Testing
5988-2386EN

Specifications

(at 0° to 55° C unless otherwise specified)

	6551A-J01 Special Order Option	6551A-J03 Special Order Option	6553A-J04 Special Order Option	6553A-J17 Special Order Option
Number of outputs	1	1	1	1
GPIO	No	No	No	No
Output ratings				
Output voltage	10 V	6 V	40 V	30 V
Output current (40° C)	50 A	60 A	12.5 A	17.5 A
Maximum current (50° C/55° C)	45 A/42.5 A	54 A/51 A	11.25 A/10.6 A	15.75 A/14.87 A
Programming accuracy at 25°C ±5°C				
Voltage	0.06% + 6 mV	5 mV	17.5 mV	15 mV
Current	0.15% + 60 mA	75 mA	13 mA	16 mA
Ripple and noise from 20 Hz to 20 MHz				
Voltage rms	300 µV	300 µV	1.6 mV	400 µV
peak-peak	3 mV	3 mV	5 mV	4 mV
Current rms	25 mA	30 mA	5 mA	6 mA
Load regulation				
Voltage	1 mV	1 mV	3.5 mV	3 mV
Current	2 mA	6.5 mA	1 mA	0.5 mA
Line regulation				
Voltage	0.5 mV	0.5 mV	1 mV	1 mV
Current	2 mA	2 mA	0.75 mA	0.75 mA
Transient response time	Less than 100 µs for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV, whichever is greater) following any step change in load current of up to 50% of rated current			
Supplemental Characteristics (Non-warranted characteristics determined by design and useful in applying the product)				
Average resolution				
Voltage	2.5 mV	2 mV	12 mV	10 mV
Current	15 mA	18 mA	4 mA	5 mA
OVP	16 mV	12 mV	65 mV	54 mV
OVP accuracy	200 mV	160 mV	750 mV	700 mV

Single-Output: 500 W (Continued)

Supplemental Characteristics for all model numbers

DC Floating Voltage: Output terminals can be floated up to ± 240 Vdc from chassis ground

Remote Sensing: Up to half the rated output voltage can be dropped in each load lead. The drop in the load leads subtracts from the voltage available for the load.

Output Programming Response Time: The rise and fall time (10/90% and 90/10%) of the output voltage is less than 15 ms. The output voltage change settles within 1 LSB (0.025% x rated voltage) of final value in less than 60 ms.

Down Programming: An active down programmer sinks approximately 20% of the rated output current

Modulation: (Analog programming of output voltage and current)
Input signal: 0 to -5 V
Input impedance: 10 k Ohm nominal

AC Input: (AC input frequency 47 to 63 Hz)
Voltage 100 Vac 120 Vac 220 Vac 240 Vac
Current 12 A 10 A 5.7 A 5.3 A

Input Power: 1,380 VA, 1,100 W at full load; 120 W at no load

Regulatory Compliance: Listed to UL 1244; certified to CSA556B; conforms to IEC 61010-1.

Size: 425.5 mm W x 132.6 mm H x 497.8 mm D (16.75 in x 5.22 in x 19.6 in)

Weight: Net, 25 kg (54 lb); shipping, 28 kg (61 lb)

Warranty Period: One year

Specifications

(at 0° to 55° C unless otherwise specified)

	6554A-J04 Special Order Option	6554A-J05 Special Order Option	6554A-J12 Special Order Option	6555A-J10 Special Order Option
Number of outputs	1	1	1	1
GPIO	No	No	No	No
Output ratings				
Output voltage	70 V	50 V	80 V	156 V
Output current (40° C)	7.5 A	10 A	6 A	3 A
Maximum current (50° C/55° C)	6.75 A/6.37 A	9 A/8.5 A	5.4 A/5.1 A	2.7 A/2.55 A
Programming accuracy at 25°C $\pm 5^\circ\text{C}$				
Voltage	0.06% + 38 mV	26 mV	35 mV	71 mV
Current	0.15% + 7 mA	9 mA	7 mA	4 mA
Ripple and noise from 20 Hz to 20 MHz				
Voltage rms	600 μV	500 μV	700 μV	900 μV
peak-peak	6 mV	5 mV	5 mV	8 mV
Current rms	5 mA	4 mA	3 mA	3 mA
Load regulation				
Voltage	4 mV	4 mV	4 mV	7 mV
Current	0.5 mA	0.5 mA	0.5 mA	1 mA
Line regulation				
Voltage	1 mV	1 mV	4.5 mV	2 mV
Current	0.5 mA	0.5 mA	0.5 mA	1 mA
Transient response time	Less than 100 μs for the output voltage to recover to its previous level (within 0.1% of the voltage rating of the supply or 20 mV, whichever is greater) following any step change in load current of up to 50% of rated current			
Supplemental Characteristics	(Non-warranted characteristics determined by design and useful in applying the product)			
Average resolution				
Voltage	17.5 mV	15 mV	20 mV	39.5 mV
Current	1.9 mA	2.75 mA	1.7 mA	8 mA
OVP	110 mV	93 mV	130 mV	250 mV
OVP accuracy	1.4 V	1.2 V	1.6 V	3.3 V

Single-Output: 500 W (Continued)

Ordering Information

- Opt 100** 87 to 106 Vac, 47 to 63 Hz
- Opt 120** 104 to 127 Vac, 47 to 63 Hz
- Opt 220** 191 to 233 Vac, 47 to 63 Hz
- Opt 240** 209 to 250 Vac, 47 to 63 Hz

* **Opt 908** Rack-mount Kit
(p/n 5062-3977)

* **Opt 909** Rack-mount Kit
w/ Handles (p/n 5063-9221)

Opt OL1 Full documentation on
CD-ROM, and printed standard
documentation package

Opt OL2 Extra copy of standard
printed documentation package

Opt OB0 Full documentation on
CD-ROM only

Opt OB3 Service Manual

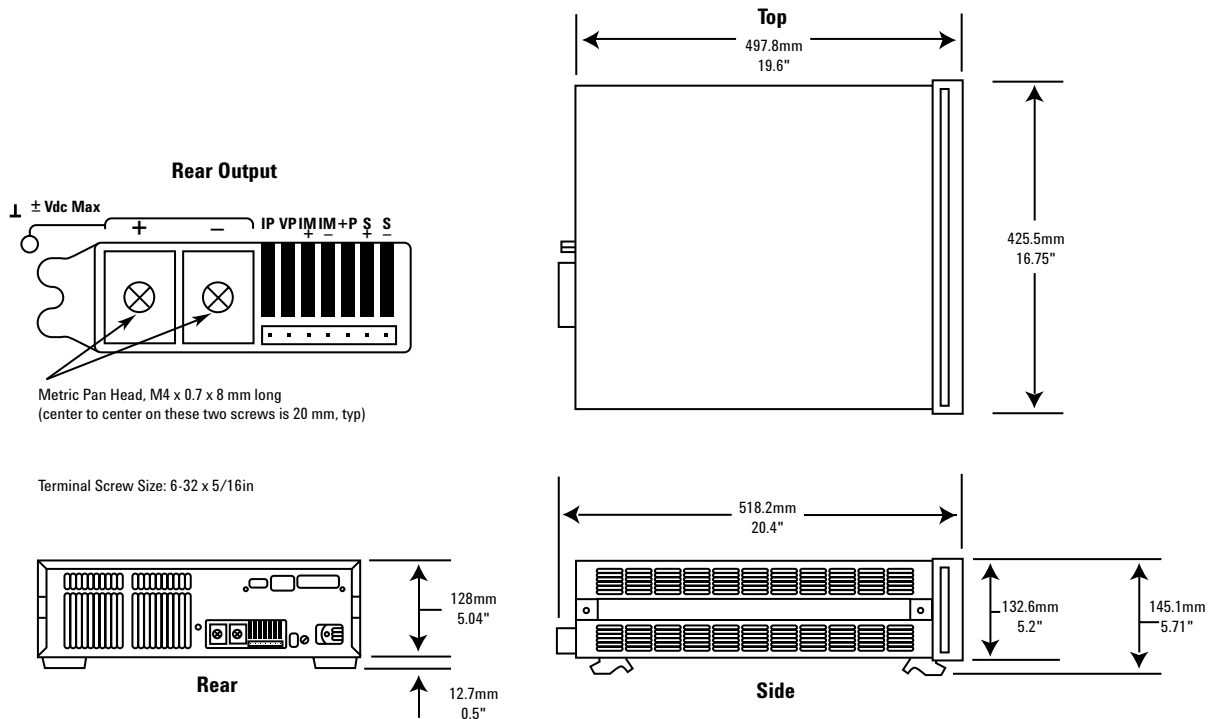
* Support rails required

Accessories

p/n 1494-0059 Accessory Slide Kit

E3663AC Support rails for Agilent
rack cabinets

Agilent Models: 6551A, 6552A, 6553A, 6554A, 6555A



More detailed specifications at www.agilent.com/find/6550

**Your Requested Excerpt from the
Agilent System and Bench Instruments Catalog 2006**

The preceding page(s) are an excerpt from the 2006 System and Bench Instruments Catalog. We hope that these pages supply the information that you currently need. If you would like to have further information about the extensive selection of Agilent DC power supplies, please visit www.agilent.com/find/power to print a copy of the complete catalog, or to request that a copy be sent to you. You will also find a lot of other useful information on this Web site.

In the full System and Bench Instruments Catalog, you will find that Agilent offers much more than DC power supplies. This catalog contains detailed technical and application information on digital multimeters, DC power supplies, arbitrary waveform generators, and many more instruments. If you need basic, clean, power for your lab bench, it's there. In each power product category we have also integrated the capabilities you need for a complete power solution, including extensive measurement and analysis capabilities.

Please give us a call at your local Agilent Technologies sales office, or call a regional office listed, for assistance in choosing or using Agilent power products.

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