



# Single-Output: 500 W



6551A-6555A

Protect valuable assemblies with fast protection features

Proven reliability

Low ripple and noise

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
<b>Number of outputs</b>	1	1	1	1	1
<b>GPIB</b>	No	No	No	No	No
<b>Output ratings</b>					
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
<b>Programming accuracy at 25° C ±5° C</b>					
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
<b>Ripple and noise from 20 Hz to 20 MHz</b>					
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
<b>Load regulation</b>					
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
<b>Line regulation</b>					
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
<b>Transient response time</b>	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
<b>Average resolution</b>					
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
<b>OVP accuracy</b>	160 mV	400 mV	700 mV	1.2 V	2.4 V



## Single-Output: 500 W (Continued)

### Supplemental Characteristics for all model numbers

**dc Floating Voltage:** Output terminals can be floated up to  $\pm 240$  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) See page 101 for more details

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

**Warranty Period:** One year

### 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
<b>Number of outputs</b>	1	1	1	1
<b>GPIO</b>	No	No	No	No
<b>Output ratings</b>				
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
<b>Programming accuracy at 25° C <math>\pm 5^\circ</math> C</b>				
Voltage	0.06% + 6 mV	5 mV	17.5 mV	15 mV
Current	0.15% + 60 mA	75 mA	13 mA	16 mA
<b>Ripple and noise from 20 Hz to 20 MHz</b>				
Voltage rms	300 $\mu$ V	300 $\mu$ V	1.6 mV	400 $\mu$ V
peak-peak	3 mV	3 mV	5 mV	4 mV
Current rms	25 mA	30 mA	5 mA	6 mA
<b>Load regulation</b>				
Voltage	1 mV	1 mV	3.5 mV	3 mV
Current	2 mA	6.5 mA	1 mA	0.5 mA
<b>Line regulation</b>				
Voltage	0.5 mV	0.5 mV	1 mV	1 mV
Current	2 mA	2 mA	0.75 mA	0.75 mA
<b>Transient response time</b>	Less than 100 $\mu$ s 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			
<b>Supplemental Characteristics</b>	(Non-warranted characteristics determined by design and useful in applying the product)			
<b>Average resolution</b>				
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
<b>OVP accuracy</b>	200 mV	160 mV	750 mV	700 mV



## 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 0L2 Extra Standard Documentation Package
- Opt 0B3 Service Manual
- Opt 0B0 No documentation package
- \* Support rails required

### Accessories

- p/n 1494-0059 Accessory Slide Kit
- E3663AC Support rails for Agilent rack cabinets

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
<b>Number of outputs</b>	1	1	1	1
<b>GPIO</b>	No	No	No	No
<b>Output ratings</b>				
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
<b>Programming accuracy at 25°C ±5°C</b>				
Voltage	0.06% + 38 mV	26 mV	35 mV	71 mV
Current	0.15% + 7 mA	9 mA	7 mA	4 mA
<b>Ripple and noise from 20 Hz to 20 MHz</b>				
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
<b>Load regulation</b>				
Voltage	4 mV	4 mV	4 mV	7 mV
Current	0.5 mA	0.5 mA	0.5 mA	1 mA
<b>Line regulation</b>				
Voltage	1 mV	1 mV	4.5 mV	2 mV
Current	0.5 mA	0.5 mA	0.5 mA	1 mA
<b>Transient response time</b>	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			
<b>Supplemental Characteristics</b> (Non-warranted characteristics determined by design and useful in applying the product)				
<b>Average resolution</b>				
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