



# Multiple-Output: 40 W-105 W GPIB



6621A-6624A, 6627A

- Fast up and down programming
- Proven reliability keeps test systems running
- Easy to integrate into a system
- Extensive protection for DUTs

Two, three, or four isolated outputs are integrated into one package, conserving rack space and GPIB addresses. Most of the outputs also provide dual ranges, for more current at lower voltage levels. The outputs can be connected in parallel or series to further increase the flexibility that these products offer the system designer.

Programming is done using industry standard SCPI commands. Test system integration can be further simplified by using the VXIPlug&Play drivers. These power supplies help reduce test time with fast up and down programming, which is enhanced by an active downprogrammer which can sink the full rated current.

## Specifications

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

Specifications		40 W output	40 W output	80 W output	80 W output	105 W output
Output power	Low-range volts, amps	0 to 7 V, 0 to 5 A	0 to 20 V, 0 to 2 A	0 to 7 V, 0 to 10 A	0 to 20 V, 0 to 4 A	0-35 V, 0-3 A
	High range volts, amps	0 to 20 V, 0 to 2 A	0 to 50 V, 0 to 0.8 A	0 to 20 V, 0 to 4 A	0 to 50 V, 0 to 2 A	—
Output combinations for each model (total number of outputs)						
	6621A (2)	—	—	2	—	—
	6622A (2)	—	—	—	2	—
	6623A (3)	1	1	1	—	—
	6624A (4)	2	2	—	—	—
	6627A (4)	—	4	—	—	—
	6623A(3) Special Order Option J03	—	2	—	—	1
Programming accuracy	Voltage	19 mV + 0.06%	50 mV + 0.06%	19 mV + 0.06%	50 mV + 0.06%	35 mV + 0.06%
	Current	50 mA + 0.16%	20 mA + 0.16%	100 mA + 0.16%	40 mA + 0.16%	30 mA + 0.16%
Readback accuracy (at 25°C ±5°C)	Voltage	20 mV + 0.05%	50 mV + 0.05%	20 mV + 0.05%	50 mV + 0.05%	35 mV + 0.05%
	+Current	10 mA + 0.1%	4 mA + 0.1%	20 mA + 0.1%	8 mA + 0.1%	6 mA + 0.1%
	-Current	25 mA + 0.2%	8 mA + 0.2%	50 mA + 0.2%	20 mA + 0.2%	15 mA + 0.2%
Ripple and noise (peak-to-peak, 20 Hz to 20 MHz; rms, 20 Hz to 10 MHz)						
	Constant voltage rms	500 µV	500 µV	500 µV	500 µV	500 µV
	peak-to-peak	3 mV	3 mV	3 mV	3 mV	3 mV
	Constant current rms	1 mA	1 mA	1 mA	1 mA	1 mA
Load regulation	Voltage	2 mV	2 mV	2 mV	2 mV	2 mV
	Current	1 mA	0.5 mA	2 mA	1 mA	2 mA
Load cross regulation	Voltage	1 mV	2.5 mV	1 mV	2.5 mV	N/A
	Current	1 mA	0.5 mA	2 mA	1 mA	N/A
Line regulation	Voltage	0.01% + 1 mV	0.01% + 1 mV	0.01% + 1 mV	0.01% + 1 mV	0.01% + 1 mV
	Current	0.06% + 1 mA	0.06% + 1 mA	0.06% + 1 mA	0.06% + 1 mA	0.06% + 1 mA

Transient response time Less than 75 µs for the output to recover to within 75 mV of nominal value following a load change within specifications



## Multiple-Output: 40 W-105 W GPIB (Continued)

### Specifications

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

40 W output	40 W output	80 W output	80 W output	105 W output
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#### Supplemental Characteristics for all model numbers

**dc Floating Voltage:** All outputs can be floated up to  $\pm 240$  Vdc from chassis ground

**Remote Sensing:** Up to 1 V drop per load lead. The drop in the load leads is subtracted from the voltage available for the load.

**Command Processing Time:** 7 ms typical with front-panel display disabled

**Down Programming:** Current sink limits are fixed approximately 10% higher than source limits for a given operating voltage above 2.5 V

**Input Power:** 550 W max., 720 VA max.

**GPIB Interface Capabilities:** SH1, AH1, T6, L4, SR1, RL1, PP1, DC1, DT0.

**Regulatory Compliance:** Listed to UL1244; conforms to IEC 61010-1; carries the CE mark.

**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 103 for more details

**Weight:** Net, 17.4 kg (38 lb); shipping, 22.7 kg (50 lb)

**Warranty Period:** Three years

#### Supplemental Characteristics

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

		40 W output	40 W output	80 W output	80 W output	105 W output
Average programming resolution	Voltage	6 mV	15 mV	6 mV 20 mV (high)	6 mV 20 mV (high)	10.5 mV
	Current	25 mA	10 mA	50 mA 20 mA (high)	50 mA 20 mA (high)	15 mA
OVP		100 mV	250 mV	100 mV 2	50 mV	175 mV
Output programming response time (time to settle within 0.1% of full scale output, after Vset command has been processed)		2 ms	6 ms	2 ms	6 ms	6 ms

#### Ordering Information

**Opt 100** 87 to 106 Vac, 47 to 66 Hz Input, 6.3 A (Japan only)

**Opt 120** 104 to 127 Vac, 47 to 63 Hz

**Opt 220** 191 to 233 Vac, 47 to 66 Hz, 3.0 A

**Opt 240** 209 to 250 Vac, 47 to 66 Hz, 3.0 A

**Opt 750** Relay Control and DFI/RI

**Opt S50** similar to option 750, however the remote inhibit does not latch

\* **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** Rack Slide Kit

**E3663A** Support rails for Agilent rack cabinets



# Precision Multiple-Output: 25 W-50 W GPIB



6625A, 6626A, 6628A, 6629A

- Precise V & I programming and readback
- Fast up and down programming
- Extensive protection for DUTs
- Easy to integrate into a system

## Specifications

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

### 25 W output

### 50 W output

Two or four isolated outputs are integrated into one package, conserving rack space and GPIB addresses. Dual ranges allow for more current at lower voltage levels. The outputs can be connected in parallel or series to further increase the flexibility that these products offer the system designer. Programming is done using industry standard SCPI commands and test system integration can be further simplified by using the VXIPlug&Play drivers. These power supplies help reduce test time with fast up and down programming, which is enhanced by the active down-programmer which can sink the full rated current.

These power supplies are very useful on the R&D bench. The accuracy of both the programming and the measurement systems allow precise control and monitoring of prototype bias power. The extensive protection features protect valuable prototypes, including very fast CV/CC crossover. The power supply can be controlled from either the front panel keypad or, for automated testing, from the GPIB.

		25 W output	50 W output
Output power	Low-range volts, amps	0 to 7 V, 0 to 15 mA	0 to 16 V, 0 to 200 mA
	High range volts, amps	0 to 50 V, 0 to 500 mA	0 to 50 V, 0 to 1 A or 0 to 16 V, 0 to 2 A
Output combinations for each model (total number of outputs)	6625A (2) Precision	1	1
	6626A (4) Precision	2	2
	6628A (2) Precision	—	2
	6629A (4) Precision	—	4
Programming accuracy (at 25°C ±5°C)	Voltage	1.5 mV + 0.016% (low) 10 mV + 0.016% (high)	3 mV + 0.016% (low) 10 mV + 0.016% (high)
	Current	15 µA + 0.04% (low) 100 µA + 0.04% (high)	185 µA + 0.04% (low) 500 µA + 0.04% (high)
Readback accuracy (at 25°C ±5°C)	Voltage	0.016% + 2 mV (low) 0.016% + 10 mV (high)	0.016% + 3.5 mV (low) 0.016% + 10 mV (high)
	+/-Current	0.03% + 15 µA (low) 0.03% + 130 µA (high)	0.04% + 250 µA (low) 0.04% + 550 µA (high)
Ripple and noise (peak-to-peak, 20 Hz to 20 MHz; rms, 20 Hz to 10 MHz)	Constant voltage rms	500 µV	500 µV
	peak-to-peak	3 mV	3 mV
Load regulation	Constant current rms	0.1 mA	0.1 mA
	Voltage	0.5 mV	0.5 mV
Load cross regulation	Current	0.005 mA	0.01 mA
	Voltage	0.25 mV	0.25 mV
Line regulation	Current	0.005 mA	0.01 mA
	Voltage	0.5 mV	0.5 mV
Transient response time change within specifications		Less than 75 µs for the output to recover to within 75 mV of nominal value following a load	
<b>Supplemental Characteristics</b>		(Non-warranted characteristics determined by design and useful in applying the product)	
		<b>25-watt output</b>	<b>50-watt output</b>
Average programming resolution	Voltage	460 µV (low) 3.2 mV (high)	1 mV (low) 3.2 mV (high)
	Current	1 µA (low) 33 µA (high)	13 µA (low) 131 µA (high)
	OVP	230 mV	230 mV
Output programming response time (time to settle within 0.1% of full scale output, after Vset command has been processed)		6 ms	6 ms



## Precision Multiple-Output: 25 W-50 W GPIB (Continued)

### Supplemental Characteristics for all model numbers

**dc Floating Voltage:** All outputs can be floated up to  $\pm 240$  Vdc from chassis ground

**Remote Sensing:** Up to 10 V drop per load lead. The drop in the load leads is subtracted from the voltage available for the load.

**Command Processing Time:** 7 ms typical with front-panel display disabled

**Input Power:** 550 W max., 720 VA max.

**GPIB Interface Capabilities:** SH1, AH1, T6, L4, SR1, RL1, PP1, DC1, DT0, C0, E1.

**Regulatory Compliance:** Listed to UL 1244; 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 103 for more details

**Weight:** 6626A, 6629A: Net, 17.4 kg (38 lb); shipping, 22.7 kg (50 lb) 6625A, 6628A: Net, 15.5 kg (34 lb); shipping, 20.8 kg (46 lb)

**Warranty Period:** Three years

### Ordering Information

**Opt 100** 87 to 106 Vac, 47 to 66 Hz Input, 6.3 A (Japan only)

**Opt 120** 104 to 127 Vac, 47 to 63 Hz

**Opt 220** 191 to 233 Vac, 47 to 66 Hz, 3.0 A

**Opt 240** 209 to 250 Vac, 47 to 66 Hz, 3.0 A

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**Opt 0L2** Extra Standard Documentation Package

**Opt 0B3** Service Manual

**Opt 0B0** No documentation package

\* Support rails required

### Accessories

p/n 1494-0059 Rack Slide Kit

E3663AC Support rails for Agilent rack cabinets

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We hope that these pages supply the information that you currently need.

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