KEYSIGHT TECHNOLOGIES (AGILENT HP)

6634A

The Keysight (formerly Agilent HP) 6634A is a 100-watt single-output programmable linear DC power supply capable of both sourcing and sinking current. Designed for precision laboratory and automated test equipment (ATE) applications, it features high-performance low-noise output, high programming accuracy, and a standard GPIB interface with software calibration.

SPECIFICATIONS

General

Interfaces	GPIB (HP-IB)
Display	Vacuum Fluorescent Display (VFD)

Physical

Power Supply	100 VAC / 120 VAC / 220 VAC / 240 VAC (factory-configured or switch-selectable depending on option), 47 to 63 Hz, 350 VA max
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	212.8 mm × 88.1 mm × 398.3 mm mm
Weight	9.6 kg kg
Rack Mount Options	Option 908 (Rack flange kit), Option 909 (Rack flange and front handle kit)

Output Specifications

Number of Outputs	1
DC Output Voltage Range	0 to 100 V
DC Output Current Range	-1 to +1 A (two-quadrant source/sink capability)
Maximum Rated Power	100 W
DC Output Voltage Programming Range	0 to 102.38 V
DC Output Current Programming Range	0.004 to 1.0238 A
Output Isolation Voltage	±240 Vdc from chassis ground

Regulation

Load Regulation (Voltage)	0.01% + 2 mV
Load Regulation (Current)	0.01% + 0.25 mA
Line Regulation (Voltage)	0.01% + 2 mV
Line Regulation (Current)	0.01% + 0.25 mA

Ripple and Noise

Constant Voltage Ripple (RMS)	0.5 mV
Constant Voltage Ripple (Peak-to-Peak)	3 mV
Constant Current Ripple (RMS)	0.5 mA

Programming Accuracy

Voltage Programming Accuracy	0.05% + 50 mV
Current Programming Accuracy	0.06% + 1.2 mA
OVP Programming Accuracy	0.1% + 1 V

Readback Accuracy

Voltage Readback Accuracy	0.05% + 50 mV
Current Readback Accuracy	0.05% + 0.8 mA

Resolution

Voltage Programming Resolution	25 mV
Current Programming Resolution	0.25 mA
OVP Programming Resolution	500 mV
Typical Voltage Readback Resolution	25 mV
Typical Current Readback Resolution	0.25 mA

Transient Response & Drift

Load Transient Response Time	100 µs (to recover to within 100 mV of nominal following a 10% to 100% load change)
Voltage Temperature Coefficient	0.01% + 1 mV per °C
Current Temperature Coefficient	0.01% + 0.025 mA per °C

Protection and Sense Capabilities

Overvoltage Protection (OVP) Range	2 to 110 V
Remote Sensing Capability	Yes
Maximum Remote Sense Lead Drop	0.5 V per lead

Compliance & Calibration

Calibration Method	Software calibration over HP-IB (no internal potentiometers)

Connectivity & Interface

Output Connection Terminals	Rear-panel screw terminals (standard); front-panel binding posts optional
Operating Modes Selector	Fast or normal mode selectable via rear-panel switch
Built-in Relays & DFI/RI Option	Available as factory option

Environmental Specifications

Storage Temperature Range	-40 to 75 °C
Cooling Method	Fan cooled

Physical Characteristics

Shipping Weight	11.8 kg
Form Factor	Half-rack, 2U

Power

AC Input Voltage	100 VAC / 120 VAC / 220 VAC / 240 VAC (jumper selectable, ±10%)
AC Input Frequency	47 to 63 Hz
Maximum AC Input Power	350 VA
AC Input Current	3.4 A @ 100 VAC / 2.9 A @ 120 VAC / 1.6 A @ 220 VAC / 1.5 A @ 240 VAC
AC Input Fuse	4 A SB (100/120 VAC) / 2 A SB (220/240 VAC)
AC Input Voltage Options	Option 100 (100 VAC) / Option 120 (120 VAC) / Option 220 (220 VAC) / Option 240 (240 VAC)

Performance

Up-programming Time (No Load)	15 ms (to within 1% of final value)
Up-programming Time (Full Load)	15 ms (to within 1% of final value)
Down-programming Time (No Load)	500 ms (to within 1% of final value)
Down-programming Time (Full Load)	15 ms (to within 1% of final value)
Command Processing Time	20 ms
Output Voltage Drift (8 hours)	0.03% + 10 mV
Output Current Drift (8 hours)	0.03% + 0.5 mA
Output Voltage Drift (30 minutes)	0.04% + 15 mV

Interfaces

GPIB Interface Capabilities	SH1, AH1, T6, L4, SR1, RL1, PP1, DC1, DT1, C0, E1
Analog Programming & Monitor (Option 002)	Provides 0-5 V or 0-10 V analog control and monitor outputs

Protection

Overcurrent Protection (OCP)	Programmable shutdown
Overtemperature Protection	Output shutdown upon high temperature

Software & Programming

Programming Language	HP proprietary command set (non-SCPI)

TECHNOLOGY

Linear DC Power Supply

APPLICATIONS

Precision DC power sourcing and sinking, automated testing (ATE)