KEYSIGHT TECHNOLOGIES (AGILENT HP)

60501A

The Keysight (Agilent HP) 60501A is a 150 Watt single-slot electronic load module designed for use with the 6050A and 6051A electronic load mainframes. It provides versatile test capabilities with Constant Current (CC), Constant Voltage (CV), and Constant Resistance (CR) modes, making it ideal for the evaluation of DC power sources and power components.

SPECIFICATIONS

General

Interfaces	None on module; GPIB and analog control available via mainframe
Display	None (utilizes the mainframe display)

Physical

Power Supply	Powered directly through the mainframe backplane
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	74.4 mm × 174.6 mm × 424.4 mm mm
Weight	3.1 kg
Module Slot Width	Single-slot

Input Ratings and Operating Ranges

Maximum Input Power	150 W
Maximum Input Voltage	60 V
Maximum Input Current	30 A
Minimum Operating Voltage at Maximum Current	3.0 V

Operating Modes & Accuracy

Constant Current (CC) Range Low	0 to 3 A
Constant Current (CC) Range High	0 to 30 A
Constant Voltage (CV) Range	3 V to 60 V
Constant Resistance (CR) Range Low	0.033 Ω to 2 Ω
Constant Resistance (CR) Range Mid	1.5 Ω to 200 Ω
Constant Resistance (CR) Range High	150 Ω to 10,000 Ω

Transient and Dynamic Characteristics

Transient Mode Frequency Range	0.25 Hz to 10 kHz

Measurement and Readback Accuracy

Voltage Readback Range	0 to 60 V
Current Readback Range Low	0 to 3 A
Current Readback Range High	0 to 30 A

Protection Features

Over-Temperature Protection	Yes (automatic thermal shutdown)

Connectivity & Control Interfaces

Analog Programming Input Voltage Range	0 to 10 V
Current Monitor Output Scale Factor	0 to 10 V (representing 0 to 30 A)

Environmental and Safety Compliance

Storage Temperature Range	-40 to 75 °C

Physical and Mechanical Specifications

Form Factor	Single-slot plug-in module
Compatible Mainframes	HP 6050A (6-slot), HP 6051A (2-slot)

Programming Specifications

CC Programming Resolution (Low Range)	0.8 mA
CC Programming Resolution (High Range)	8 mA
CV Programming Resolution	16 mV
CC Programming Accuracy (Low Range)	0.15% + 10 mA
CC Programming Accuracy (High Range)	0.15% + 60 mA
CV Programming Accuracy	0.12% + 65 mV

Readback Accuracy

Voltage Readback Accuracy	0.05% + 45 mV
Current Readback Accuracy (Low Range)	0.12% + 7 mA
Current Readback Accuracy (High Range)	0.12% + 35 mA

Transient Operation

CC Slew Rate Range (Low Range)	0.0012 A/µs to 0.12 A/µs
CC Slew Rate Range (High Range)	0.012 A/µs to 1.2 A/µs
Transient Mode Duty Cycle Range	3% to 97%

Ripple and Noise

Ripple and Noise (Current, rms/p-p)	3 mA / 30 mA (20 Hz to 10 MHz)
Ripple and Noise (Voltage, rms)	4 mV (20 Hz to 10 MHz)

Protection Levels

Over-Current Protection Threshold	31.5 A (nominal)
Over-Power Protection Threshold	165 W (nominal)
Over-Voltage Protection Threshold	64 V (nominal)

General Specs

Remote Sense Max Voltage Drop	2 V per lead

Performance

CC Mode Load Regulation	10 mA
CC Mode Line Regulation	2 mA
CV Mode Load Regulation	10 mV
CV Mode Line Regulation	5 mV

Safety & Compliance

Maximum Common-Mode Isolation Voltage	150 VDC (input to chassis)

APPLICATIONS

Power supply testing, battery characterization, and component evaluation

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.