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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 6643A DC Power Supply

HP Agilent 6643A System DC Power Supply 35 V 6 A The Agilent/Keysight 6643A is a 200 W single-output linear-regulated GPIB DC power supply in the 6640A series. OEM datasheet ratings are 0 to 35 V and 0 to 6 A at 40 C with SCPI control and active downprogramming. ATE 35 V class bias, production test with fast programming protection features, and GPIB automated DC sourcing. Active downprogrammer about 20% of rated current The Agilent/Keysight 6643A is a 200 W single-output linear-regulated GPIB DC power supply in the 6640A series. OEM datasheet ratings are 0 to 35 V and 0 to 6 A at 40 C with SCPI control and active downprogramming. ATE 35 V class bias, production test with fast programming protection features, and GPIB automated DC sourcing. Active downprogrammer about 20% of rated current Fast crowbar and mode crossover protection features of the series



MODEL

**Agilent / Keysight
6643A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

6643A

LISTING

<https://aumictechlabs.com/products/6643a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 6643A is a programmable DC power supply delivering 0–20 V at 0–5 A (100 W) for precision testing, research, and device characterization. The unit combines exceptionally tight load and line regulation ($\leq 0.02\% + 5 \text{ mV}$) with low output noise ($\leq 1 \text{ mV RMS}$ in CV mode, $\leq 2 \text{ mA RMS}$ in CC mode), making it suitable for sensitive analog and power electronics applications. Fast transient response ($\leq 300 \mu\text{s}$ for 1% voltage change across 50–100% load steps) ensures stable operation under dynamic conditions. Technical Specifications Output voltage programs

from 0–20 V with 10 mV resolution and $\pm(0.1\% \text{ of setting} + 0.05\% \text{ of range})$ accuracy. Current output spans 0–5 A with 1 mA resolution and $\pm(0.2\% \text{ of setting} + 0.1\% \text{ of range})$ accuracy. Voltage readback achieves $\pm(0.05\% \text{ of reading} + 10 \text{ mV})$; current readback, $\pm(0.1\% \text{ of reading} + 2 \text{ mA})$. Analog programming interfaces accept 0–5 VDC inputs (1 V/V for voltage, 1 A/V for current). Remote sensing compensates for output lead losses. The digital front panel displays both voltage and current in real time.

Key Features Adjustable overvoltage, overcurrent, and overtemperature protection Remote and local output control Line regulation $\leq 0.02\% + 5 \text{ mV}$; load regulation $\leq 0.02\% + 5 \text{ mV}$ Output ripple and noise: 1 mV RMS (20 Hz–20 MHz, CV mode) Transient response $\leq 300 \mu\text{s}$ (1% settling, 50–100% load transient) Dimensions: 5.1 × 16.75 × 14.6 in; weight 24 lbs Optional rack mount configuration available

Typical Applications Precision power delivery for analog circuit development, semiconductor device testing, sensor calibration, and laboratory research requiring stable, low-noise supplies with fast response times.

Compatibility & Integration Operates from 47–63 Hz AC mains. Temperature rated 0–50 °C operating; storage –20–70 °C at 20–80% RH (non-condensing). Analog control architecture supports integration into automated test systems via standard voltage/current programming inputs.

6643A Characteristics / Specifications

PARAMETER	VALUE
Number of Outputs	1
GPIO	Yes
Output Voltage Rating	0 to 35 V
Output Current Rating At 40 C	0 to 6 A
Maximum Current At 50 C	5.4 A
Maximum Current At 55 C	5.1 A
Programming Accuracy Voltage	0.06% + 15 mV at 25 C plus or minus 5 C
Programming Accuracy Current	0.15% + 6.7 mA at 25 C plus or minus 5 C
Ripple Voltage RMS	400 uV (20 Hz to 20 MHz)
Ripple Voltage Peak to Peak	4 mV
Ripple Current RMS	3 mA
Readback Accuracy Voltage	0.07% + 25 mV
Readback Accuracy Positive Current	0.15% + 5 mA
Readback Accuracy Negative Current	0.35% + 12 mA
Load Regulation Voltage	3 mV
Load Regulation Current	0.25 mA
Line Regulation Voltage	1 mV
Line Regulation Current	0.25 mA
Transient Response Time	less than 100 us for up to 50% current step
Programming Resolution Voltage	10 mV
Programming Resolution Current	2 mA
OVP Resolution	54 mV
OVP Accuracy	700 mV
Output Rise Fall Time	less than 15 ms
Output Settle Time	less than 60 ms to 1 LSB

PARAMETER	VALUE
Downprogrammer Sink Class	approximately 20% of rated current
Analog Program Input	0 to minus 5 V
Analog Program Impedance	10 kOhm nominal
Command Processing Time	20 ms average on GPIB
Output Terminal Isolation	plus or minus 240 Vdc from chassis ground
AC Input Power Full Load	480 VA, 400 W
Size	425.5 mmWx 88.1 mmHx 439 mmDNet Weight: 14.2 kg (31.4 lb)

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

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Notes
Specs from Agilent 6640A Series data sheet column for 6643A.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.