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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 66321D DC Source 0-15V 0-3A

Keysight 66321D Mobile Communications DC Source with Battery Emulation and Auxiliary DVM

The Keysight/Agilent 66321D is a single-output 15 V / 3 A (5 A peak for 7 ms) mobile-communications DC source with programmable output resistance and a rear-panel auxiliary DVM. It provides the 66321B battery-emulation output plus D-suffix DC and AC+DC voltmeter readback (-25 to +25 Vdc). Transient recovery is less than 20 μ s; typical voltage dip is 40 mV with up to 15 ft 22 AWG wiring. Single-port battery emulation for handsets and portable devices; fixture IR-drop cancellation with negative resistance; digitized battery-drain waveforms; rear DVM monitoring of DUT test points.

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MODEL

**HP / Agilent
66321D**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

66321D

LISTING

<https://aumictechlabs.com/products/66321d-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 66321D is a DC source purpose-built for testing battery-powered wireless communication devices. It delivers 0-15 V and 0-3 A continuous output with 5 A peak current

capability (up to 7 ms), making it ideal for characterizing current drain across device operating modes. The unit combines a precision power source with an integrated digital voltmeter and dynamic measurement system, enabling accurate battery behavior simulation and transient load response analysis in production test environments.

Technical Specifications

Output Ratings
Voltage: 0–15 V Continuous current: 0–3 A Peak current (up to 7 ms): 5 A Power: 45 W

Programming Accuracy (25 °C ±5 °C) Voltage: ±0.05% of setting + 10 mV Current: ±0.05% of setting + 1.33 mA

DC Measurement Accuracy (25 °C ±5 °C) Voltage readback: ±0.03% + 5 mV Current readback: ±0.2% + 0.5 mA (–3 A to +5 A); ±0.1% + 0.2 mA (–1 A to +1 A); ±0.1% + 2.5 µA (–20 mA to +20 mA)

Transient Response and Regulation Transient response time: < 20 µs Transient voltage drop: < 40 mV Load regulation: 5 mV voltage, 0.75 mA current Line regulation: 0.5 mV voltage, 0.75 mA current

Ripple and Noise (20 Hz–20 MHz) Voltage: 1 mV rms, 6 mV peak-to-peak Current: 2 mA rms

Key Features Output resistance programming from –0.04 Ω to 1 Ω simulates internal battery resistance (Ni-Cad, Ni-MH, Li-Ion, Li-Polymer) Negative resistance programming compensates for wiring voltage drops in test fixtures Dynamic measurement system captures current drain across talk, active, standby, and sleep modes 4096-point buffer with 15 µs sampling interval GPIB interface for automated test integration

Typical Applications Current drain characterization of mobile phones, PDAs, and portable wireless devices Battery life validation for Bluetooth and Wireless LAN products Transient load testing of cellular handsets and communication modules Production-volume battery emulation and power delivery analysis

Compatibility & Integration Supports testing of 3G, cdma2000, WCDMA, CDMA, TDMA, GSM, PCS, DECT, TETRA, PHS, NADC, Bluetooth, and Wireless LAN devices. Compatible with Keysight 14565B software for battery drain analysis.

Features & description

From manufacturer datasheet

Features

- Single main output with -40 milliohm to +1 ohm programmable resistance
- Auxiliary DVM (D suffix) not present on 66321B
- 1 A measurement range at 0.1 percent plus 0.2 mA
- Open-sense detection; up to 6 m load leads
- 4096-point digitizer, 15 us to 31200 s sampling
- GPIB SCPI; 14565B CCDF/logging with firmware A.03.00 or higher

66321D Characteristics / Specifications

PARAMETER	VALUE
Model	66321D
Manufacturer	Agilent / Keysight
Instrument Type	Single output mobile communications DC source with auxiliary DVM
Family	66300 Mobile Communications DC Sources
Alias	Agilent 66321D; Keysight 66321D
Number Of Outputs	1
Main Output Voltage	0 to 15 V
Main Output Current	0 to 3 A
Main Peak Current	5 A for up to 7 ms
Programming Accuracy Voltage	0.05 percent plus 10 mV at 25 plus/minus 5 C
Programming Accuracy Plus Current	0.05 percent plus 1.33 mA at 25 plus/minus 5 C
Ripple Voltage RMS	1 mV (20 Hz to 20 MHz)
Ripple Voltage PP	6 mV
Ripple Current RMS	2 mA
DC Measurement Voltage	0.03 percent plus 5 mV
DC Measurement minus 3 A to plus 5 A	0.2 percent plus 0.5 mA (dc detector)
DC Measurement minus 1 A to plus 1 A	0.1 percent plus 0.2 mA
DC Measurement minus 20 mA to plus 20 mA	0.1 percent plus 2.5 uA
Dynamic Buffer Size	4096 points
Sampling Interval	15 us to 31200 s
Transient Response Time	less than 20 us to within 20 mV after 0.1 to 1.5 A step
Transient Voltage Dip Typical	40 mV (up to 15 ft 22 AWG)
Programmable Resistance Range	-40 milliohm to +1 ohm
Resistance Programming Accuracy	0.5 percent plus 2 milliohm
Resistance Resolution	1 milliohm

PARAMETER	VALUE
DVM Input Range	-25 to +25 Vdc
DVM DC Readback	0.04 percent plus 5 mV at 25 plus/minus 5 C
DVM AC Plus DC Readback	1 percent plus 5 mV (60 kHz to 10 kHz; sine greater than 25 mV rms)
DVM Common Mode	-4.5 Vdc to +25 Vdc relative to output 1 minus (user guide)
Output Programming Rise Fall	less than 200 us (10/90 percent)
Command Processing Time	4 ms average (display disabled)
Measurement Time Average	50 ms
DC Floating Voltage	plus/minus 50 Vdc maximum from chassis
Remote Sense Main	up to 3 V total in both load leads
Input Power Worst Case	1.7 A, 125 W at 100 Vac full load
Size	212.8 mmWx 88.1 mmHx 435 mmDNet Weight: 9.1 kg (20 lb)
Line Options	100 87-106 Vac; 120 104-127 Vac; 220 191-233 Vac; 230 207-253 Vac; 47-63 Hz
Related Without DVM	66321B
Related Dual Output	66319B / 66319D
Related Without Battery R	66311B

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.

Specifications	
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Main Peak Current	5 A for up to 7 ms
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Programming Accuracy Plus Current	0.05 percent plus 1.33 mA at 25 plus/minus 5 C
Ripple Voltage RMS	1 mV (20 Hz to 20 MHz)
Ripple Voltage PP	6 mV
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DC Measurement Voltage	0.03 percent plus 5 mV
DC Measurement minus 3 A to plus 5 A: 0.2 percent plus 0.5 mA (dc detector)	
DC Measurement minus 1 A to plus 1 A: 0.1 percent plus 0.2 mA	
DC Measurement minus 20 mA to plus 20 mA: 0.1 percent plus 2.5 uA	
Specifications	
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Transient Response Time	less than 20 us to within 20 mV after 0.1 to 1.5 A step
Transient Voltage Dip Typical	40 mV (up to 15 ft 22 AWG)
Programmable Resistance Range	-40 milliohm to +1 ohm
Resistance Programming Accuracy	0.5 percent plus 2 milliohm

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Resistance Resolution	1 milliohm
DVM Input Range	-25 to +25 Vdc
DVM DC Readback	0.04 percent plus 5 mV at 25 plus/minus 5 C
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Size	212.8 mmWx 88.1 mmHx 435 mmDNet Weight: 9.1 kg (20 lb)
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Related Without DVM	66321B
Related Dual Output	66319B / 66319D
Related Without Battery R	66311B

Notes

Specs from Keysight 5988-6569EN 66321B/D column plus the 66319B/D 66321B/D user guide DVM common-mode note. This file is 66321D (battery emulation and DVM). Do not apply 66332A 20 V / 5 A / 100 W rows.

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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30-day returns
NAICS 423690 · 811210 · 541380
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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.