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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 66319B DC Source 0-15V 0-3A w/ Battery Emulation

The Keysight/Agilent 66319B is a dual-output 15 V / 3 A (5 A peak for 7 ms) mobile-communications DC source with programmable output resistance for battery emulation. Output 1 sources or sinks, digitizes voltage and current (4096-point buffer, 15 μ s to 31200 s sampling), and recovers from 0.1 to 1.5 A load steps in less than 20 μ s. An auxiliary 12 V / 1.5 A output simulates a charger port. The D-suffix 66319D adds a rear-panel DVM; this file is the 66319B without that DVM. Handset and WLAN battery-port emulation; charger-port simulation on the auxiliary output; dynamic battery-drain (talk/standby/sleep) current measurement; negative-resistance compensation of fixture wiring. Keysight 66319B Dual Output Mobile Communications DC Source with Battery Emulation

The Keysight/Agilent 66319B is a dual-output 15 V / 3 A (5 A peak for 7 ms) mobile-communications DC source with programmable output resistance for battery emulation. Output 1 sources or sinks, digitizes voltage and current (4096-point buffer, 15 μ s to 31200 s sampling), and recovers from 0.1 to 1.5 A load steps in less than 20 μ s. An auxiliary 12 V / 1.5 A output simulates a charger port. The D-suffix 66319D adds a rear-panel DVM; this file is the 66319B without that DVM.



MODEL

**HP / Agilent
66319B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

66319B

LISTING

<https://aumictechlabs.com/products/66319b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 66319B is a dual-output DC source purpose-built for mobile communications device testing with integrated battery emulation. It characterizes battery operating life and detects product failures early by simulating real-world battery conditions in cellular phones, PDAs, Bluetooth devices, and wireless LAN equipment. Dual outputs enable simultaneous testing of main battery and charger circuits, optimizing bench space and eliminating the need for multiple supplies.

Technical Specifications

Electrical Output (per output)

Voltage: 0 to 15 V

Current: 0 to 3 A (continuous); 5 A peak (up to 7 ms)

Maximum power: 45 W per output

Voltage ripple and noise (20 Hz to 20 MHz): 1 mV rms / 6 mVpp

Programming accuracy at 25°C ±5°C: ±10 mV voltage, ±1.33 mA current

DC readback accuracy: 0.03% + 5 mV (voltage); 0.2% + 0.5 mA at -3 A to +5 A (current)

Output response time (10/90%): <200 µs

Voltage settling: <6 ms (2 ms in fast mode)

Transient voltage dip: 40 mV with <20 µs response time

Battery Emulation

Simulates internal battery resistance effects and wiring voltage drop compensation

High capacitance compensation: accommodates 50% load current changes

Remote sensing capability: up to 3 V drop on main output, 4 V on auxiliary output

Measurement System

Dynamic measurement buffer: 4096 points

Sampling interval: 15 µs variable

Data acquisition and query processing: 50 ms average

Key Features

- Dual-output architecture for simultaneous main battery and charger testing
- Programmable output resistance for battery emulation
- Fast transient response (<20 µs) for dynamic load conditions
- Low voltage ripple (1 mV rms) for sensitive device characterization
- Advanced measurement system for current drain analysis across device modes

Typical Applications

Battery life testing, charger circuit validation, power management IC characterization, mobile device compliance testing.

Compatibility & Integration

Indoor use rated; Installation Category II, Pollution Degree 2. EMC compliance: 89/336/EEC (ISM 1B). Operating altitude up to 2000 m, maximum humidity 95%.

Features & description

From manufacturer datasheet

Features

- Dual output: main battery emulator plus 12 V / 1.5 A charger simulator
- Programmable resistance -40 milliohm to +1 ohm on the main output (66319/66321 high-performance models)
- Typical transient dip 40 mV with up to 15 ft 22 AWG wiring
- Open-sense detection; up to 6 m load leads
- DSP dynamic measurements including 1 A current range (0.1 percent plus 0.2 mA)
- GPIB SCPI; 14565B battery-drain analysis (CCDF/logging needs firmware A.03.00 or higher)

66319B Characteristics / Specifications

PARAMETER	VALUE
Model	66319B
Manufacturer	Agilent / Keysight
Instrument Type	Dual output mobile communications DC source
Family	66300 Mobile Communications DC Sources
Alias	Agilent 66319B; Keysight 66319B
Number Of Outputs	2
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 (high capacitance compensation)
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

PARAMETER	VALUE
Resistance Resolution	1 milliohm
Auxiliary Output Voltage	0 to 12 V
Auxiliary Output Current	0 to 1.5 A
Auxiliary Programming Voltage	0.2 percent plus 40 mV
Auxiliary Programming Current	0.2 percent plus 4.5 mA
Auxiliary Measurement Voltage	0.2 percent plus 15 mV
Auxiliary Measurement Current	0.2 percent plus 3 mA
Auxiliary Ripple Voltage RMS PP	1 mV / 6 mV
Output Programming Rise Fall	less than 200 us (10/90 percent) on output 1
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	2 A, 170 W at 100 Vac full load
Size	212.8 mmWx 88.1 mmHx 435 mmDNet Weight: 9.1 kg (20 lb)
Shipping Weight	11.1 kg (25 lb)
Line Options	100 87-106 Vac; 120 104-127 Vac; 220 191-233 Vac; 230 207-253 Vac; 47-63 Hz
Related With DVM	66319D
Related Single Output	66321B / 66321D

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.

performance models)

- Typical transient dip 40 mV with up to 15 ft 22 AWG wiring
- Open-sense detection; up to 6 m load leads
- DSP dynamic measurements including 1 A current range (0.1 percent plus 0.2 mA)
- GPIB SCPI; 14565B battery-drain analysis (CCDF/logging needs firmware A.03.00 or higher)

Technical Specifications

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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

Specifications

PARAMETER	VALUE
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 (high capacitance compensation)

PARAMETER	VALUE
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
Auxiliary Output Voltage	0 to 12 V
Auxiliary Output Current	0 to 1.5 A
Auxiliary Programming Voltage	0.2 percent plus 40 mV
Auxiliary Programming Current	0.2 percent plus 4.5 mA
Auxiliary Measurement Voltage	0.2 percent plus 15 mV
Auxiliary Measurement Current	0.2 percent plus 3 mA
Auxiliary Ripple Voltage RMS PP	1 mV / 6 mV
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Command Processing Time	4 ms average (display disabled)
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Line Options	100 87-106 Vac; 120 104-127 Vac; 220 191-233 Vac; 230 207-253 Vac; 47-63 Hz
Related With DVM	66319D
Related Single Output	66321B / 66321D

Notes

Specs from Keysight Mobile Communications DC Sources technical overview 5988-6569EN for the 66319B/D column. This file is 66319B (no auxiliary DVM). Solid-state relays are Option 521. CCDF and long-term logging require firmware A.03.00 or higher with 14565B software.

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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Generated August 13, 2026

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