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**Data Sheet**

August 14, 2026

HP / AGILENT

## HP / Agilent 3457A Digital Multimeter

HP Agilent 3457A 6.5 Digit Digital Multimeter The HP/Agilent 3457A is a 6.5-digit (extendable resolution) system/bench DMM measuring DC/AC volts and current, resistance, frequency, and period with reading rates greater than 1000/s and optional scanner cards. Published specifications include DCV ranges 30 mV to 300 V with 10 nV sensitivity, 10 G $\Omega$  input on low ranges, true-RMS ACV bandwidth to 1 MHz, ohms to 3 G $\Omega$ , and frequency to 1.5 MHz on voltage input. Automated system DMM with stored states and readings, precision DC and true-RMS AC measurements, 2-wire/4-wire ohms, frequency/period counting on AC signals, and multiplexed measurements with optional scanner assemblies. The HP/Agilent 3457A is a 6.5-digit (extendable resolution) system/bench DMM measuring DC/AC volts and current, resistance, frequency, and period with reading rates greater than 1000/s and optional scanner cards. Published specifications include DCV ranges 30 mV to 300 V with 10 nV sensitivity, 10 G $\Omega$  input on low ranges, true-RMS ACV bandwidth to 1 MHz, ohms to 3 G $\Omega$ , and frequency to 1.5 MHz on voltage input. Automated system DMM with stored states and readings, precision DC and true-RMS AC measurements, 2-wire/4-wire ohms, frequency/period counting on AC signals, and multiplexed measurements with optional scanner assemblies.



MODEL

**HP / Agilent 3457A**

CALIBRATION

**Available on request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**3457A**

LISTING

<https://aumictechlabs.com/products/3457a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

**This unit**

The HP/Agilent 3457A is a high-resolution digital multimeter engineered for precision measurement in benchtop and system-integrated environments. It delivers 3½ to 6½ digits of resolution, extendable to 7½ digits, with exceptional DC voltage accuracy of 5 ppm over 90 days. The instrument provides flexible reading rates from 1 reading every 2 seconds to 1350 readings/second at 3½ digits, making it suitable for both slow analog measurements and high-speed data acquisition.

**Technical Specifications**

**DC Voltage:** 30 mV to 300 V range with 10 nV sensitivity. Accuracy spans 0.0017% + 6 counts at 3 V to 0.005% + 6 counts at 300 V (90-day calibration cycle). Input resistance reaches 10 GΩ on ranges to 3 V, dropping to 10 MΩ ± 1% on higher ranges.

**AC Voltage:** 1 MHz true RMS bandwidth across 30 mV to 300 V. Best accuracy of 0.13% + 0.116 counts from 100 Hz to 20 kHz. Input impedance is 1 MΩ ± 1% with less than 90 pF shunt capacitance.

**Current Measurement:** DC ranges from 300 μA to 1 A with input resistance values 0.1 Ω to 1000 Ω. AC current operates on 30 mA, 300 mA, and 1 A ranges with accuracies of 0.25% + 290 counts and 0.35% + 290 counts respectively.

**Resistance:** 2-wire and 4-wire configurations spanning 30 Ω to 3 GΩ. Best accuracy is 0.0035% + 6 counts at 3 kΩ and 30 kΩ ranges. Sensitivity extends from 10 μΩ to 1 kΩ.

**Frequency:** Voltage input from 10 Hz to 1.5 MHz; current input from 10 Hz to 100 kHz.

**Key Features**

- Storage for over 1000 readings or complete measurement sequences
- Non-volatile setup memory for instrument state preservation
- Built-in math functions: PASS/FAIL limit testing, NULL, SCALE, and thermistor linearization
- Total electronic calibration including AC voltage
- HP-IB interface standard
- Optional multiplexer assemblies expand capability to ten channels

**Typical Applications**

Precision component characterization, automated test systems, laboratory calibration standards, and long-term monitoring requiring high resolution with drift control.

**Compatibility & Integration**

HP-IB interface enables direct integration into automated measurement systems. Non-volatile memory supports field reconfiguration without external programming.

## 3457A Characteristics / Specifications

| PARAMETER                            | VALUE                                                                  |
|--------------------------------------|------------------------------------------------------------------------|
| DCV Ranges                           | 30 mV, 300 mV, 3 V, 30 V, 300 V                                        |
| DCV Sensitivity                      | 10 nV                                                                  |
| DCV Input Resistance To 3 V          | 10 G $\Omega$                                                          |
| DCV Input Resistance 30 V and 300 V  | 10 M $\Omega$ $\pm$ 1%                                                 |
| DCV 90 Day Accuracy 3 V Class        | 0.0017% + 6 counts                                                     |
| DCV 90 Day Accuracy 300 mV Class     | 0.0025% + 39 counts                                                    |
| ACV Ranges                           | 30 mV to 300 V                                                         |
| ACV Bandwidth True RMS               | 20 Hz to 1 MHz class (catalog); best midband accuracy tables in manual |
| ACV Best Accuracy Midband Class      | 0.13% + counts class 100 Hz to 20 kHz                                  |
| ACV Input Impedance                  | 1 M $\Omega$ $\pm$ 1% shunted by less than 90 pF                       |
| ACV Crest Factor                     | 3.5 to 1 at full scale                                                 |
| Resistance Ranges                    | 30 ohm to 3 G $\Omega$                                                 |
| Resistance Best Accuracy Mid Ranges  | 0.0035% + 6 counts class                                               |
| DCI Ranges                           | 300 $\mu$ A, 3 mA, 30 mA, 300 mA, 1 A                                  |
| ACI Ranges                           | 30 mA, 300 mA, 1 A                                                     |
| ACI Bandwidth                        | 20 Hz to 100 kHz                                                       |
| Frequency Range Voltage Input        | 10 Hz to 1.5 MHz                                                       |
| Frequency Range Current Input        | 10 Hz to 100 kHz                                                       |
| Frequency Accuracy 10 to 400 Hz      | 0.05%                                                                  |
| Frequency Accuracy 400 Hz to 1.5 MHz | 0.01%                                                                  |
| Frequency Sensitivity                | 10 mV or 100 $\mu$ A sinewave                                          |
| Memory Partition Bytes Available     | 2139 bytes class                                                       |
| Reading Rate Class                   | greater than 1000 readings/s under specified conditions                |
| Maximum Voltage                      | 300 Vac or 300 Vdc                                                     |

| PARAMETER | VALUE                                                                            |
|-----------|----------------------------------------------------------------------------------|
| Bandwidth | True RMS: 20 Hz to 1 MHz class (catalog); best midband accuracy tables in manual |

# 3457A Specifications

| PARAMETER                                     | VALUE                                                         |
|-----------------------------------------------|---------------------------------------------------------------|
| HP Agilent 3457A 6.5 Digit Digital Multimeter | Overview                                                      |
| Key Features                                  | 3.5 to 6.5 digit selectable resolution with high-speed memory |
| Technical Specifications                      | DCV Ranges: 30 mV, 300 mV, 3 V, 30 V, 300 V                   |

# 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 include DCV ranges 30 mV to 300 V with 10 nV sensitivity, 10 GΩ input on low ranges, true-RMS ACV bandwidth to 1 MHz, ohms to 3 GΩ, and frequency to 1.5 MHz on voltage input.

Applications

Automated system DMM with stored states and readings, precision DC and true-RMS AC measurements, 2-wire/4-wire ohms, frequency/period counting on AC signals, and multiplexed measurements with optional scanner assemblies.

Key Features

3.5 to 6.5 digit selectable resolution with high-speed memory

Autocal for ohms gain/offset and AC flatness/DC offset nulls

Optional general-purpose scanner or multiplexer assemblies

Program and reading storage for greater than 1000 readings/s class applications

HP-IB system DMM for bench or rack use

Technical Specifications

## Technical Specifications

| PARAMETER                   | VALUE                           |
|-----------------------------|---------------------------------|
| DCV Ranges                  | 30 mV, 300 mV, 3 V, 30 V, 300 V |
| DCV Sensitivity             | 10 nV                           |
| DCV Input Resistance To 3 V | 10 GΩ                           |

DCV Input Resistance 30 V and 300 V: 10 MΩ ±1%

## Specifications

| PARAMETER                           | VALUE                                                                  |
|-------------------------------------|------------------------------------------------------------------------|
| DCV 90 Day Accuracy 3 V Class       | 0.0017% + 6 counts                                                     |
| DCV 90 Day Accuracy 300 mV Class    | 0.0025% + 39 counts                                                    |
| ACV Ranges                          | 30 mV to 300 V                                                         |
| ACV Bandwidth True RMS              | 20 Hz to 1 MHz class (catalog); best midband accuracy tables in manual |
| ACV Best Accuracy Midband Class     | 0.13% + counts class 100 Hz to 20 kHz                                  |
| ACV Input Impedance                 | 1 MΩ ±1% shunted by less than 90 pF                                    |
| ACV Crest Factor                    | 3.5 to 1 at full scale                                                 |
| Resistance Ranges                   | 30 ohm to 3 GΩ                                                         |
| Resistance Best Accuracy Mid Ranges | 0.0035% + 6 counts class                                               |
| DCI Ranges                          | 300 uA, 3 mA, 30 mA, 300 mA, 1 A                                       |
| ACI Ranges                          | 30 mA, 300 mA, 1 A                                                     |
| ACI Bandwidth                       | 20 Hz to 100 kHz                                                       |

| PARAMETER                            | VALUE                                                   |
|--------------------------------------|---------------------------------------------------------|
| Frequency Range Voltage Input        | 10 Hz to 1.5 MHz                                        |
| Frequency Range Current Input        | 10 Hz to 100 kHz                                        |
| Frequency Accuracy 10 to 400 Hz      | 0.05%                                                   |
| Frequency Accuracy 400 Hz to 1.5 MHz | 0.01%                                                   |
| Frequency Sensitivity                | 10 mV or 100 uA sinewave                                |
| Memory Partition Bytes Available     | 2139 bytes class                                        |
| Reading Rate Class                   | greater than 1000 readings/s under specified conditions |
| Maximum Voltage                      | 300 Vac or 300 Vdc                                      |

#### Notes

Range and accuracy highlights from HP 3457A service/operation specification tables and HPWiki summary of OEM limits. Use Table 1-1 in the service manual for the authoritative 24-hour/90-day/1-year matrices at the selected NPLC.

### Available from Aumictech

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

Request a quote: [sales@aumictech.com](mailto: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.