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Data Sheet

August 12, 2026

HP / AGILENT

HP / Agilent 42841A Bias Current Source

The 42841A is a 20 A DC bias current source paired with HP/Agilent/Keysight precision LCR meters (4284A with Opt 002, 4285A, E4980A). It enables DC current-biased inductance measurements for power inductors and magnetic components. One unit provides up to 20 A; two units in parallel with the 42842B fixture and 42843A cable support up to 40 A in the low-frequency LCR range. Alias: 42841A; Agilent 42841A; HP 42841A; Keysight 42841A Max bias current two units parallel: 40 A Compatible LCR meters: 4284A Opt 002, 4285A, E4980A Frequency with bias E4980A/4284A class: 20 Hz to 2 MHz (up to 40 A configuration)



MODEL

**HP / Agilent
42841A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

42841A

LISTING

<https://aumictechlabs.com/products/42841a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 42841A Bias Current Source is a DC bias accessory for Agilent/Keysight impedance analyzers, delivering stable current to devices under test for impedance characterization across varying bias conditions. It enables precise measurement of components - particularly inductors - under simulated operational currents, essential for R&D, quality control, and production testing in switching power supplies and RF applications. Technical Specifications DC Bias Current Ranges: 0.00 A to 1.00 A: Resolution 0.01 A, Accuracy $\pm(1\% + 5 \text{ mA})$ 1.1 A to 5.0 A: Resolution 0.1 A, Accuracy $\pm 2\%$ 5.1 A to 20.0 A: Resolution 0.1 A, Accuracy $\pm 3\%$ Maximum Output Current: 10 A with 4285A 20 A with 4284A (single unit) 40 A with 4284A (two units in parallel) 40 A with E4980A (two units in parallel) Frequency Range (dependent on host analyzer): 20 Hz to 2

MHz with E4980A 20 Hz to 1 MHz with 4284A 75 kHz to 30 MHz with 4285A

Key Features

- Front panel control via compatible LCR meter
- Modular design supporting single or dual-unit configurations for higher current requirements
- Tiered accuracy specifications: $\pm(1\% + 5 \text{ mA})$ at sub-ampere levels, $\pm 2\text{--}3\%$ at higher ranges
- Installation Category II, Pollution Degree 2 per IEC 1010-1
- Indoor-use only, standard AC power input

Compatibility & Integration

The 42841A integrates with:

- E4980A (Option E4980A-002)
- 4284A (Option 4284A-002)
- 4285A (Option 4285A-002)

Complete measurement systems require compatible bias test fixtures (42842A, 42842B, or 42842C), appropriate test leads, and bias current cables per configuration. Dual-unit 40 A configurations demand the 42842B fixture and 42843A bias current cable.

Features & description

From manufacturer datasheet

Features

- Dedicated interface cable to compatible LCR meters
- Parallel dual-unit operation for 40 A systems
- Works with protective bias fixtures 42842A (20 A) and 42842B (40 A)
- Fixture voltage-monitor terminal for external DVM (use meters with ≥ 10 MOhm input)
- Bias set from LCR keys or external controller

Applications

- L-IDC characterization of power inductors and transformers
- DC-biased inductance sweeps with LCR list sweep
- Production and R&D magnetic-component evaluation
- Automated bias via LCR front panel or GPIB/HP-IB

42841A Characteristics / Specifications

PARAMETER	VALUE
Model	42841A
Manufacturer	HP / Agilent
Instrument Type	Bias Current Source
Alias	42841A; Agilent 42841A; HP 42841A; Keysight 42841A
Max bias current one unit	20 A
Max bias current two units parallel	40 A
Compatible LCR meters	4284A Opt 002, 4285A, E4980A
Frequency with bias E4980A/4284A class	20 Hz to 2 MHz (up to 40 A configuration)
List sweep bias points	up to 10 (4284A systems) 20 A fixture: 42842A 40 A fixture: 42842B 40 A interconnect cable: 42843A
Test leads typically	16048A Notes Specs from HP/Keysight 42841A product literature and Application Note 369-8. Confirm Opt 002 on 4284A and which fixture/cable set is present.

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

Specifications

PARAMETER	VALUE
Model	42841A
Manufacturer	HP / Agilent
Instrument Type	Bias Current Source
Alias	42841A; Agilent 42841A; HP 42841A; Keysight 42841A

Specifications

PARAMETER	VALUE
Max bias current one unit	20 A
Max bias current two units parallel	40 A
Compatible LCR meters	4284A Opt 002, 4285A, E4980A
Frequency with bias E4980A/4284A class	20 Hz to 2 MHz (up to 40 A configuration)

Higher-frequency bias class with 4285A systems: up to 10 A (75 kHz to 30 MHz class literature)

System basic accuracy class for configured L-IDC setups: about 1% (HP AN 369-8)

List sweep bias points: up to 10 (4284A systems)

20 A fixture: 42842A

40 A fixture: 42842B

40 A interconnect cable: 42843A

Test leads typically: 16048A

Notes

Specs from HP/Keysight 42841A product literature and Application Note 369-8. Confirm Opt 002 on 4284A and which fixture/cable set is present.

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.