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Data Sheet

August 13, 2026

HP/HEWLETT PACKARD

Hewlett Packard 8508A Vector Voltmeter + 85051B Input Module

The Hewlett Packard 8508A Vector Voltmeter with the 85051B Input Module is a precision instrument for measuring AC voltage magnitude and phase. It offers high accuracy and resolution, ideal for characterizing RF and microwave components and systems. The 85051B input module extends the frequency range and enhances the measurement capabilities of the 8508A.



MODEL

**HP/Hewlett
Packard
8508A/85051B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8508A/85051B

LISTING

<https://aumictechlabs.com/products/8508a-85051b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Hewlett Packard 8508A Vector Voltmeter paired with the 85051B Input Module is a precision dual-channel receiver for AC voltage magnitude and phase characterization of RF and microwave signals. This combination delivers high-accuracy measurements across an extended frequency range, enabling detailed impedance analysis, network characterization, and transmission/reflection measurements. The 85051B input module enhances measurement capability and extends the operational frequency envelope of the 8508A mainframe. Technical Specifications Measurement Performance Dynamic range: Over 90 dB Sensitivity: 10 μ V Phase

difference resolution: At least 0.1 degree Phase difference range: +180 to -180 degrees Search and lock time: 40 ms lockup within one range Maximum input: 2 V peak AC, ± 50 Vdc A-channel minimum signal: 10 mV (100 kHz to 300 kHz); 1 mV (300 kHz to 3 MHz); 300 μ V (3 MHz to 1 GHz) B-channel noise floor: 10 μ V Input Configuration with 85051B Module Frequency range: Extends 8508A capability Input type: 50-ohm connectors Power requirements: 100/120/220/240 VAC, $\pm 10\%$, 48 to 440 Hz, single phase Maximum power consumption: Typically 40 VA Physical Dimensions Standard configuration: 425.5 mm W $\times$ 133 mm H $\times$ 473.3 mm D Weight (net): 8.1 kg Option 001 with bail handle and protective cover: 524.5 mm W $\times$ 158.8 mm H $\times$ 524.5 mm D; net weight 9.4 kg

Key Features Dual-channel autoranging receiver for CW signal analysis Simultaneous measurement of two CW signal voltages plus phase difference between them Output display modes: voltage or power (linear or log), normalized magnitude and phase angle, real and imaginary components Built-in network analysis procedures for impedance and phase matching evaluation Calibration capability against known standards HP-IB interface for ATE integration and automated programming

Typical Applications RF and microwave component characterization Impedance and S-parameter measurements System calibration and validation Phase relationship analysis in dual-signal environments

Compatibility & Integration The 85051B input module is designed specifically to enhance the 8508A Vector Voltmeter. The combination supports HP-IB interfacing for seamless integration into automated test systems and remote operation configurations.

Features & description

From manufacturer datasheet

Features

- Automatic tuned dual-channel vector voltmeter

Applications

- RF voltage and phase measurements on active and passive networks

8508A85051B Characteristics / Specifications

PARAMETER	VALUE
Model	8508A
Manufacturer	Hewlett-Packard / Agilent / Keysight
Instrument Type	Vector Voltmeter
Alias	HP 8508A; Agilent 8508A
Standard input module	85081B high-impedance probes
Frequency range with 85081B	100 kHz to 1 GHz
Frequency range with 85082A	300 kHz to 2 GHz
Maximum input	2 V peak AC; +/-50 Vdc
Maximum input with 85082A	+16 dBm class
Input crosstalk 1 MHz to 500 MHz	greater than 100 dB
Input crosstalk 500 MHz to 1 GHz	greater than 80 dB
Absolute magnitude accuracy 1 MHz to 100 MHz	+/-0.3 dB
Ratio magnitude accuracy 1 MHz to 100 MHz	+/-0.2 dB
Phase accuracy 1 MHz to 100 MHz	+/-1 degree
Search and lock time above 3 MHz	20 ms
Search and lock time to 3 MHz	40 ms
Power	100/120/220/240 V; 48 to 440 Hz; 40 VA
Size	425.5 × 133 × 473.3 mm
Weight net	8.1 kg
Listed companion 85051B actual identity	7 mm verification kit 45 MHz to 18 GHz Notes 8508A specs from HP catalog vector-voltmeter pages. OEM 85051B is a 7 mm PNA verification kit (20/50 dB attenuators, airlines), not an 8508A input module—confirm which accessories ship with this listing.

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	8508A
Manufacturer	Hewlett-Packard / Agilent / Keysight
Instrument Type	Vector Voltmeter

Alias: HP 8508A; Agilent 8508A

Standard input module: 85081B high-impedance probes

Optional input module: 85082A 50 ohm Type-N

Specifications

PARAMETER	VALUE
Frequency range with 85081B	100 kHz to 1 GHz
Frequency range with 85082A	300 kHz to 2 GHz
Maximum input	2 V peak AC; +/-50 Vdc

Maximum input with 85082A: +16 dBm class

A-channel minimum 100 kHz to 300 kHz: 10 mV

A-channel minimum 300 kHz to 3 MHz: 1 mV

A-channel minimum 3 MHz to 1 GHz: 300 uV

B-channel noise level: 10 uV

Input crosstalk 1 MHz to 500 MHz: greater than 100 dB

Input crosstalk 500 MHz to 1 GHz: greater than 80 dB

Absolute magnitude accuracy 1 MHz to 100 MHz: +/-0.3 dB

Ratio magnitude accuracy 1 MHz to 100 MHz: +/-0.2 dB

Specifications

PARAMETER	VALUE
Phase accuracy 1 MHz to 100 MHz	+/-1 degree
Search and lock time above 3 MHz	20 ms
Search and lock time to 3 MHz	40 ms

Specifications

PARAMETER	VALUE
Power	100/120/220/240 V; 48 to 440 Hz; 40 VA
Size	425.5 x 133 x 473.3 mm
Weight net	8.1 kg

Listed companion 85051B actual identity: 7 mm verification kit 45 MHz to 18 GHz

Notes

8508A specs from HP catalog vector-voltmeter pages. OEM 85051B is a 7 mm PNA verification kit (20/50 dB attenuators, airlines), not an 8508A input module-confirm which accessories ship with this listing.

Ordering Information

OPTION	DESCRIPTION
Option 050	uses the HP 85082A 50 ohm Type-N module (300 kHz to 2 GHz). Note: OEM literature identifies 85051B as a 7 mm network-analyzer verification kit (45 MHz to 18 GHz)

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

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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.