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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 5005B

The HP 5005B is a signature multimeter that combines signature analysis with digital-multimeter and counter functions. OEM 5005/5006 family catalogs list 5006A as the dedicated DC-to-25 MHz signature analyzer and 5005B as the signature-plus-DMM instrument for digital-board troubleshooting when analog measurements are needed at the same node. Digital-board signature tracing plus DCV/frequency checks without swapping instruments. Family: HP 5005 / 5006 signature analysis Related Signature Only: 5006A DC to 25 MHz signature analyzer, 4-digit hexadecimal Operating Temperature Class: laboratory digital-service window Primary Power Class: mains powered benchtop Literature: HP 5005B signature multimeter catalogs Measurement: compressed signature of a node plus DMM



MODEL	CALIBRATION
Agilent / Keysight 5005B	Available on request
CONDITION	STATUS
Used	In stock
RFQ / SKU	LISTING
5005B	https://aumictechlabs.com/products/5005b-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 5005B is a signature multimeter designed for rapid troubleshooting of complex digital circuits. It combines signature analysis, multimeter functions, and counter capabilities into a single multifunction probe, compressing digital data streams into four-character signatures for fault identification with greater than 99.998% confidence. Real-time testing operates up to 25 MHz across multiple logic families, with qualified signature mode and composite signature support for efficient testing of complex products.

Technical Specifications

Signature Analysis Patented signature analysis technique with real-time testing to 25 MHz Four-

digit signature compression of digital data streams Fault detection confidence exceeding 99.998%, independent of data stream length Supports multiple logic families Qualified signature mode for simplified complex product testing Composite signatures for efficient signal grouping and testing Signature memory to reduce probing errors Multimeter Functions 4.5-digit DC voltmeter Ohmmeter Differential voltmeter Peak voltage measurement mode for logic high/low verification against logic family specifications Counter Functions Frequency and totalize measurements to 50 MHz Time interval measurements with 100 nanosecond resolution Characterization of one-shots, timers, interrupt lines, reset lines, and RS-232 asynchronous interfaces Clock and clock driver circuit verification Key Features Multifunction probe with pushbutton measurement triggering Internal signal multiplexing to appropriate measurement function Performance tuned for analog measurements in digital troubleshooting Power supply and circuit board integrity checking Analog integrity verification for active digital signals Voltage threshold capability assessment for logic level degradation detection HP-IB programmability for automated test system integration Typical Applications Digital circuit fault diagnosis and isolation Logic family compliance verification Clock and timing circuit characterization Power supply and signal integrity validation Troubleshooting legacy HP/Agilent equipment (non-ASIC dependent) Compatibility & Integration Full HP-IB programmable interface enables remote operation and integration into automated test environments. Compatible with multiple logic families. Products under test must incorporate specific test features designed or retrofitted for signature analysis support.

5005B Characteristics / Specifications

PARAMETER	VALUE
Model	5005B
Instrument Type	Signature multimeter
Family	HP 5005 / 5006 signature analysis
Related Signature Only	5006A DC to 25 MHz signature analyzer, 4-digit hexadecimal
Display Class	hexadecimal signature plus DMM readout
Qualifiers	start, stop, and clock family
Remote Control	HP-IB class
Use Case	digital board signature plus analog checks
Form Factor	benchtop signature multimeter
Manufacturer	HP Agilent Keysight
Probe Class	data probe with clock/start/stop
Logic Family Class	TTL CMOS compatible class
Dmm Functions Class	voltage and frequency class on 5005B
Operating Temperature Class	laboratory digital-service window
Primary Power Class	mains powered benchtop
Literature	HP 5005B signature multimeter catalogs
Measurement	compressed signature of anode plus DMM
Compare Mode	known-good signature tables
Gate	start/stop windowing of the bit stream
Clock Edge	qualified clock input
System Role	component-level digital troubleshooting with analog
Documentation Type	OEM catalog specifications
Operating temperature	Class: laboratory digital-service window

5005B Specifications

PARAMETER	VALUE
HP 5005B Signature Multimeter	Overview
Applications	Digital-board signature tracing plus DCV/frequency checks without swapping instruments.
Signature analysis plus DMM	Same 5005/5006 family as 5006A
Technical Specifications	Model: 5005B

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: laboratory digital-service window
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Primary Power Class	mains powered benchtop
Literature	HP 5005B signature multimeter catalogs
Measurement	compressed signature ofanode plus DMM
Compare Mode	known-good signature tables
Gate	start/stop windowing of the bit stream
Clock Edge	qualified clock input
System Role	component-level digital troubleshooting with analog
Documentation Type	OEM catalog specifications Notes From HP 5005B signature-multimeter identity in the 5005/5006 family. DMM ranges and the 5005B clock-frequency ceiling are on the 5005B data sheet; 25 MHz is the 5006A listing and is not assigned here as a 5005B number.

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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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.