

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight P5001B

Agilent Keysight P5001B Streamline Series Vector Network Analyzer The Agilent/Keysight P5001B is a compact 2-port Streamline Series VNA covering 9 kHz to 6.5 GHz. OEM Streamline Series data sheets list 1 Hz frequency resolution, plus or minus 7 ppm accuracy, and best-in-class dynamic range in a USB/Thunderbolt-hosted chassis. Passive component, amplifier, mixer, and frequency-converter S-parameter characterization in R&D and manufacturing. Same firmware/application platform as benchtop PNA/ENA/PXI VNAs The Agilent/Keysight P5001B is a compact 2-port Streamline Series VNA covering 9 kHz to 6.5 GHz. OEM Streamline Series data sheets list 1 Hz frequency resolution, plus or minus 7 ppm accuracy, and best-in-class dynamic range in a USB/Thunderbolt-hosted chassis. Passive component, amplifier, mixer, and frequency-converter S-parameter characterization in R&D and manufacturing. Same firmware/application platform as benchtop PNA/ENA/PXI VNAs Compact portable chassis controlled by an external PC



MODEL

**Agilent / Keysight
P5001B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

P5001B

LISTING

<https://aumictechlabs.com/products/p5001b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight P5001B is a PC-based, two-port vector network analyzer operating from 9 kHz to 6.5 GHz. This compact Streamline Series instrument connects via Thunderbolt 3 to deliver fast, repeatable RF characterization without requiring onboard data storage. Its lightweight, portable design enables field deployment and team sharing in space-constrained environments. Technical

Specifications Frequency Range: 9 kHz to 6.5 GHz Ports: 2 Input Impedance: 50 Ω Dynamic Range: 148 dB Trace Noise: 0.0015 dB rms (10 kHz IFBW) Output Power: 10 dBm Sweep Types: Linear, Log, Segment, CW, Power, DC source Interface: Thunderbolt 3 (USB Type-C connectors)Key Features One-handed portability with minimal physical footprint High-speed Thunderbolt 3 connectivity for efficient measurement throughput Measurement science, GUI, and SCPI command compatibility with Keysight's higher-performance VNA platforms No onboard data storage - suitable for classified environments Electronic Calibration (ECal) module support Cascadable architecture for extended port configurations Software-upgradeable with optional measurement applications: Pulsed-RF measurements Automatic Fixture Removal (AFR) Time Domain Analysis (TDR) Noise Figure with vector correction Embedded LO capability Gain Compression measurements Spectrum Analysis Multiport calibrated measurements Performance-enabling software upgrades available; VNA activation software keeps instrument currentTypical Applications Component characterization, RF filter and amplifier testing, transmission line analysis, fixture de-embedding, and field-based RF diagnostics.Compatibility & Integration Connects to host PC via Thunderbolt 3. Host PC requirements and recommended system configurations are documented separately.

P5001B Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Compact Streamline Series vector network analyzer
Series Family	Keysight P500xB Streamline Series
Port Count	2-port
Frequency Range	9 kHz to 6.5 GHz
Test Port Connector	3.5 mm female
Frequency Resolution	1 Hz
Frequency Accuracy	plus or minus 7 ppm at 25 plus or minus 5 C
Frequency Stability Typical	plus or minus 7 ppm 0 to 50 C; plus or minus 3 ppm per year maximum
System Dynamic Range 50 MHz to 3 GHz	140 dB specification / 150 dB typical (P5000B to P5004B table)
System Dynamic Range IF Bandwidth	10 Hz IF bandwidth; source maximum power minus receiver noise floor
Maximum Output 10 MHz to 4.5 GHz Spec	plus 10 dBm specification / plus 13 dBm typical
Maximum Output Midband Spec	plus 10 dBm specification 10 MHz to 6.5 GHz class (plus 10 dBm 4.5 to 6.5 GHz)
Maximum Output Highband Spec	plus 10 dBm specification 4.5 to 6.5 GHz; plus 9 dBm 6.5 to 9 GHz class
Power Sweep Typical Lowband	minus 60 to plus 13 dBm typical 10 MHz to 4.5 GHz
Power Level Accuracy 100 kHz to 15 GHz	plus or minus 1.5 dB specification at 0 dBm stepped sweep
Power Level Linearity 9 kHz to 10 GHz	plus or minus 0.75 dB specification relative to 0 dBm stepped sweep
Harmonics Typical 10 MHz to 20 GHz	minus 25 dBc at 0 dBm (listed frequency is harmonic)
Subharmonic Typical 10 MHz to 20 GHz	minus 35 dBc typical at 0 dBm
Host Interface	Thunderbolt 3 USB Type-C two ports
Reference Input Connector	MCX class external 10 MHz reference (family I/O)
Reference Input Amplitude	see Streamline B-models general information for 10 MHz I/O levels
Characteristic Impedance	50 ohm nominal
Warm Up	60 minutes with VNA application running
Specified Temperature	25 C plus or minus 5 C

PARAMETER	VALUE
Surrounding Environment Before Turn On	minus 10 C to 55 C stable for 60 minutes
Dimensions Width	176 mm (6.93 in)
Dimensions Height 2 Port	48 mm (1.89 in)
Dimensions Depth	333 mm (13.11 in)
Weight 2 Port	1.88 kg (4.14 lb) 2-port P5000B to P5004B class
Calibration IF Bandwidth	10 Hz IF bandwidth, no averaging, 23 C plus or minus 3 C
Software Platform	same measurement science as PNA ENA and PXI VNA families
Application Options Class	enhanced TDR, automatic fixture removal, spectrum analysis, pulsed RF
Multi Site Operation	up to two independent VNA instances per PC evaluated over Thunderbolt 3
DC Power Connector	Kycon KPJX-4S-S 4-pin DC power connector
Model Group Table	P5000B to P5004B 2-port family
Bandwidth	10 Hz IF bandwidth; source maximum power minus receiver noise floor

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 tables published by band
Multi-instrument and multi-site configurations via application software
Technical Specifications

Technical Specifications

PARAMETER	VALUE
Instrument Type	Compact Streamline Series vector network analyzer
Series Family	Keysight P500xB Streamline Series
Port Count	2-port
Frequency Range	9 kHz to 6.5 GHz
Test Port Connector	3.5 mm female
Frequency Resolution	1 Hz
Frequency Accuracy	plus or minus 7 ppm at 25 plus or minus 5 C
Frequency Stability Typical	plus or minus 7 ppm 0 to 50 C; plus or minus 3 ppm per year maximum

System Dynamic Range 50 MHz to 3 GHz: 140 dB specification / 150 dB typical (P5000B to P5004B table)
System Dynamic Range IF Bandwidth: 10 Hz IF bandwidth; source maximum power minus receiver noise floor
Maximum Output 10 MHz to 4.5 GHz Spec: plus 10 dBm specification / plus 13 dBm typical

Specifications

PARAMETER	VALUE
Maximum Output Midband Spec	plus 10 dBm specification 10 MHz to 6.5 GHz class (plus 10 dBm 4.5 to 6.5 GHz)
Maximum Output Highband Spec	plus 10 dBm specification 4.5 to 6.5 GHz; plus 9 dBm 6.5 to 9 GHz class
Power Sweep Typical Lowband	minus 60 to plus 13 dBm typical 10 MHz to 4.5 GHz

Power Level Accuracy 100 kHz to 15 GHz: plus or minus 1.5 dB specification at 0 dBm stepped sweep
Power Level Linearity 9 kHz to 10 GHz: plus or minus 0.75 dB specification relative to 0 dBm stepped sweep

Specifications

PARAMETER	VALUE
Harmonics Typical 10 MHz to 20 GHz	minus 25 dBc at 0 dBm (listed frequency is harmonic)
Subharmonic Typical 10 MHz to 20 GHz	minus 35 dBc typical at 0 dBm
Host Interface	Thunderbolt 3 USB Type-C two ports
Reference Input Connector	MCX class external 10 MHz reference (family I/O)

PARAMETER	VALUE
Reference Input Amplitude	see Streamline B-models general information for 10 MHz I/O levels
Characteristic Impedance	50 ohm nominal
Warm Up	60 minutes with VNA application running
Specified Temperature	25 C plus or minus 5 C
Surrounding Environment Before Turn On	minus 10 C to 55 C stable for 60 minutes
Dimensions Width	176 mm (6.93 in)
Dimensions Height 2 Port	48 mm (1.89 in)
Dimensions Depth	333 mm (13.11 in)
Weight 2 Port	1.88 kg (4.14 lb) 2-port P5000B to P5004B class
Calibration IF Bandwidth	10 Hz IF bandwidth, no averaging, 23 C plus or minus 3 C
Software Platform	same measurement science as PNA ENA and PXI VNA families
Application Options Class	enhanced TDR, automatic fixture removal, spectrum analysis, pulsed RF
Multi Site Operation	up to two independent VNA instances per PC evaluated over Thunderbolt 3
DC Power Connector	Kycon KPJX-4S-S 4-pin DC power connector
Model Group Table	P5000B to P5004B 2-port family

Notes

Numeric rows from Keysight Streamline Series Vector Network Analyzer B-models data sheet P5001B column in the P5000B to P5004B tables.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

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