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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 8112A 50 MHz Pulse Generator

HP Agilent 8112A 50 MHz Programmable Pulse Generator The HP 8112A is a fully programmable 50 MHz pulse generator with 5 ns transitions and up to 32 Vpp into open circuit. OEM specifications cover fully variable period, delay, width, double-pulse spacing, and linear/cosine edges, plus HP-IB control and modulation capabilities for complex real-life waveforms. Used for general digital and analog pulse stimulus, modulated burst generation, three-level signal work, automated production test over HP-IB, and bench characterization needing high-amplitude variable-edge pulses. The HP 8112A is a fully programmable 50 MHz pulse generator with 5 ns transitions and up to 32 Vpp into open circuit. OEM specifications cover fully variable period, delay, width, double-pulse spacing, and linear/cosine edges, plus HP-IB control and modulation capabilities for complex real-life waveforms. Used for general digital and analog pulse stimulus, modulated burst generation, three-level signal work, automated production test over HP-IB, and bench characterization needing high-amplitude variable-edge pulses.



MODEL

HP / Agilent 8112A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

8112A

LISTING

<https://aumictechlabs.com/products/8112a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 8112A is a fully programmable 50 MHz pulse generator engineered for precision timing, triggering, and waveform synthesis in research, development, and production test environments. It delivers deterministic pulse control across five operating modes Normal, Trigger, Gate, Ext Width, and Ext Burst - with external modulation capabilities for complex signal

generation. The instrument combines fast edge transitions, wide amplitude range, and comprehensive triggering flexibility with an intuitive softkey interface and HP-IB programmability.

Technical Specifications

Pulse Generation Frequency range: 1 Hz to 50 MHz Pulse width: 10.0 ns to 950 ms ($\pm 5\%$ ± 2 ns accuracy) Period: 20.0 ns to 950 ms Delay: 75.0 ns to 950 ms (± 4 ns accuracy) Double pulse: 20.0 ns to 950 ms Duty cycle: 1% to 99% ($\pm 10\%$ accuracy) Transition times: 5 ns typical (fixed); 6.5 ns to 95.0 ms (variable linear and cosine); $\pm 5\%$ ± 2 ns accuracy

Waveforms: Full pulse, ramps, haversines

Output Maximum amplitude (open circuit): 32 V peak-to-peak Maximum amplitude (50 Ω): 16 V peak-to-peak Output impedance: 50 Ω $\pm 5\%$ Output levels: -7.90 V to $+8.00$ V (high); -8.00 V to $+7.90$ V (low) Amplitude accuracy: $\pm 1\%$ $\pm 3\%$ ± 40 mV Settling time: 100 ns + transition time

Triggering & Control Trigger sources: Internal, External Trigger modes: Burst, Gate, Trigger Ext Burst: 1 to 1999 pulses External modulation: Upper level, width, period, delay

Key Features Nine store/recall memory locations for parameter sets Self-test and error recognition Output limit protection (high/low levels) HP-IB interface with full programmability Softkey operating concept State retention in memory

Typical Applications Digital circuit characterization and timing validation Communication device testing and protocol simulation Timing system verification and calibration Production test automation with external triggering Modulated burst generation for complex waveform analysis

Compatibility & Integration HP-IB (GPIB) connectivity supports all programming functions including learn, status query, and instrument capability interrogation.

8112A Characteristics / Specifications

PARAMETER	VALUE
Period range	20.0 ns to 950 ms
Delay range	75.0 ns to 950 ms
Double pulse range	20.0 ns to 950 ms
Width range	10.0 ns to 950 ms
Timing accuracy	±5% of programmed value ±2 ns (delay ±5 ns class)
Duty cycle range	1% to 99% (min 10 ns, max period – 10 ns)
Duty cycle accuracy	±10% of programmed value
Timing resolution	3 digits, 100 ps best case
Timing jitter	max 0.2% of programmed value + 100 ps
Linear transition range 10% to 90%	6.5 ns to 95.0 ms
Max edge ratio within overlapping ranges	1:20 over 1.5 decade ranges
Transition accuracy	±5% of programmed value ±2 ns
Minimum transition typical	about 5 ns (3.5 ns 20%–80%)
Preshoot overshoot ringing	±5% ±10 mV
Maximum output amplitude into open circuit	32 Vpp
Operating temperature	0 °C to 55 °C
Storage temperature	–40 °C to +65 °C
Humidity	95% RH, 0 °C to 40 °C
Power	100/120/220/240 V rms +5%/–10%, 48 to 440 Hz
Power consumption	120 VA max
Net weight	5.9 kg
Shipping weight	8.0 kg
Dimensions	89 mm H × 212.3 mm W × 450 mmDHPIB functions: SR1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT1 class
Repeatability	factor 4 better than accuracy

PARAMETER	VALUE
Store recall locations	9 plus 1 fixed set

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	−40 °C to +65 °C
Operating temperature	0 °C to 55 °C
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Humidity	95% RH, 0 °C to 40 °C
Power	100/120/220/240 V rms +5%/−10%, 48 to 440 Hz
Power consumption	120 VA max
Net weight	5.9 kg
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Dimensions	89 mm H × 212.3 mm W × 450 mmDHPIB functions: SR1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT1 class
Repeatability	factor 4 better than accuracy
Store recall locations	9 plus 1 fixed set Notes Values are from HP/Agilent 8112A Pulse Generator datasheet and operating manual specification sections (50 ohm load, 0 °C to 55 °C unless noted). Amplitude capability into 50 ohm is lower than the open-circuit maximum; use OEM load tables for exact levels.

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 cover fully variable period, delay, width, double-pulse spacing, and linear/cosine edges, plus HP-IB control and modulation capabilities for complex real-life waveforms.

Applications

Used for general digital and analog pulse stimulus, modulated burst generation, three-level signal work, automated production test over HP-IB, and bench characterization needing high-amplitude variable-edge pulses.

Key Features

Fully programmable timing including delay and double-pulse spacing

Variable linear and cosine transitions with independent leading/trailing edges

External modulation of level, width, period, and delay for complex bursts

Auto, trigger, gate, external-width, and related operating modes

Nine store/recall locations plus nonvolatile current-state retention

Compact half-rack form factor with full HP-IB capability

Technical Specifications

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Storage temperature	-40 °C to +65 °C
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Power	100/120/220/240 V rms +5%/-10%, 48 to 440 Hz

PARAMETER	VALUE
Power consumption	120 VA max
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Shipping weight	8.0 kg
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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

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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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.