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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 8111A 20 MHZ PULSE/FUNCTION GENERATOR

HP 8111A Pulse/Function Generator 1 Hz to 20 MHz The HP 8111A combines pulse and function generation in one half-rack instrument. Waveforms include sine, triangle, ramp, square, pulse, and haversine functions from 1.00 Hz to 20.0 MHz into 50 ohm. Amplitude is 1.6 mVpp to 16.00 Vpp with offset to plus/minus 8.00 V. Modes cover normal, trigger, gate, VCO, and Option 001 counted burst. General-purpose pulse and analog stimulus to 20 MHz; haversine/havertriangle start-phase tests; VCO-controlled sweeps; ATE with counted burst Option 001. The HP 8111A combines pulse and function generation in one half-rack instrument. Waveforms include sine, triangle, ramp, square, pulse, and haversine functions from 1.00 Hz to 20.0 MHz into 50 ohm. Amplitude is 1.6 mVpp to 16.00 Vpp with offset to plus/minus 8.00 V. Modes cover normal, trigger, gate, VCO, and Option 001 counted burst. General-purpose pulse and analog stimulus to 20 MHz; haversine/havertriangle start-phase tests; VCO-controlled sweeps; ATE with counted burst Option 001.



MODEL

HP / Agilent 8111A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

8111A

LISTING

<https://aumictechlabs.com/products/8111a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 8111A is a 20 MHz pulse/function generator that delivers precise waveform synthesis across seven distinct output types - sine, triangle, ramp, square, pulse, haversine, and

havertriangle. This compact benchtop instrument spans 1 Hz to 20.0 MHz with $\pm 5\%$ frequency accuracy ($\pm 10\%$ below 10 Hz) and exceptional jitter performance of $< 0.1\% + 50$ ps, making it suitable for component testing, production validation, and service environments requiring high repeatability. The pulse generator section provides pulse widths from 25.0 ns to 100 ms with $\pm 5\% \pm 2$ ns accuracy and rise/fall times under 10 ns. Variable duty cycle operation extends to 999 kHz (10% to 90%), while fixed 50% duty cycle is available across the full frequency range. Output amplitude spans 1.60 mVpp to 16.00 Vpp with 32 Vpp capability on all waveforms, supported by programmable DC offset up to +8.00 V and 50 ohm output impedance. Triggered, gated, and VCO modes provide flexible stimulus control. The voltage-controlled oscillator accepts external signals from 0.1 V to 10 V (DC to 1 kHz) across a 2-decade tuning range. Optional burst mode generates 1 to 1999 precise waveform cycles with an "extra cycle" feature for event examination. Digital parameter entry with 3-digit frequency and pulse-width resolution ensures repeatable, error-checked operation. Technical Specifications Frequency: 1 Hz to 20.0 MHz with $\pm 5\%$ accuracy ($\pm 10\%$ below 10 Hz); jitter $< 0.1\% + 50$ ps; stability $\pm 0.2\%$ over 1 hour, $\pm 0.5\%$ over 24 hours Pulse width: 25.0 ns to 100 ms at $\pm 5\% \pm 2$ ns accuracy; rise/fall time < 10 ns Amplitude: 1.60 mVpp to 16.00 Vpp (32 Vpp maximum); $\pm 5\%$ accuracy at 1 kHz DC offset: 0 to +8.00 V with 3-digit resolution Duty cycle: 10–90% variable to 999 kHz; 50% fixed to 20 MHz Output impedance: 50 ohm $\pm 5\%$ Key Features Seven waveform types for diverse test scenarios Triggered, gated, and VCO operating modes Burst mode with 1–1999 period control and extra-cycle examination (Option 001) Perturbation specification: $< \pm 5\%$ ($< +10\%$ below 0.16 Vpp) Digital display with error detection Physical & Environmental Dimensions: 89 mm (H) $\times$ 212.3 mm (W) $\times$ 345 mm (D); weight 4.6 kg. Operating range: 0°C to 55°C. Rack mount kits available (single: HP 5061-9672; dual: HP 5061-9674). Compatibility & Integration Originally Hewlett-Packard manufactured; now badged as Agilent. All HP model designations correspond to equivalent Agilent parts.

Features & description

From manufacturer datasheet

Features

- Combined pulse and function generator in one box
- 3-digit frequency; pulse width 25.0 ns to 100 ms
- Transitions less than 10 ns for pulse and square
- VCO range two decades with 0.1 V to 10 V external
- Option 001 burst 1 to 1999 periods

8111A Characteristics / Specifications

PARAMETER	VALUE
Model	8111A
Manufacturer	Hewlett Packard / Agilent
Instrument Type	Pulse/function generator
Alias	HP 8111A; Agilent 8111A
Waveforms	sine; triangle; ramp; square; pulse; haverfunctions
Frequency Range	1.00 Hz to 20.0 MHz
Frequency Resolution	3 digits
Frequency Accuracy At 50 Percent Duty	5 percent (plus/minus 10 percent below 10 Hz)
Jitter	less than 0.1 percent plus 50 ps
Stability 1 Hour	plus/minus 0.2 percent
Stability 24 Hours	plus/minus 0.5 percent
Duty Cycle Calibrated	50 percent nominal
Duty Cycle Variable Below 1 MHz	10 percent to 90 percent
Duty Cycle Resolution	2 digits
Pulse Width Range	25.0 ns to 100 ms
Pulse Width Accuracy	plus/minus 5 percent plus/minus 2 ns
Amplitude Range Into 50 Ohm	1.6 mVpp to 16.00 Vpp
Amplitude Resolution	3 1/2 digits
Amplitude Accuracy At 1 kHz Sine Triangle	plus/minus 5 percent
Flatness Sine Triangle	plus/minus 3 percent (+10 percent -15 percent above 1 MHz)
Offset Range	0.00 mV to plus/minus 8.00 V
THD 1 Hz To 1 MHz	less than 3 percent (-30 dB)
Harmonics 1 MHz To 20 MHz	less than -26 dBc
Triangle Linearity	less than plus/minus 3 percent (less than plus/minus 1 percent below 1 MHz)

PARAMETER	VALUE
Pulse Square Transitions	less than 10 ns
Perturbations	less than plus/minus 5 percent (less than 10 percent below 0.16 Vpp)
Output Impedance	50 ohm plus/minus 5 percent
Modes	normal; trigger; gate; VCO; Option 001 burst
VCO Range	2 decades; ext 0.1 V to 10 V dc to 1 kHz
Burst Length Option 0	1 to 1999 periods
Operating Temperature	0 C to 55 C
Storage Temperature	-40 C to +75 C
Humidity	95 percent RH 0 C to 40 C
Mains	100/120/220/240 V rms +5/-10 percent; 48 to 440 Hz; 70 VA max
Net Weight	4.6 kg (10 lb)
Shipping Weight	6.6 kg (15 lb)
Size	89 mmHx 212.3 mmWx 345 mmDRepeatability Factor: 2.5 better than accuracy

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	40 C to +75 C
Operating temperature	0 C to 55 C
Operating Temperature	0 C to 55 C
Humidity	95 percent RH 0 C to 40 C
Mains	100/120/220/240 V rms +5/-10 percent; 48 to 440 Hz; 70 VA max
Net Weight	4.6 kg (10 lb)
Shipping Weight	6.6 kg (15 lb)
Size	89 mmHx 212.3 mmWx 345 mmDRepeatability Factor: 2.5 better than accuracy Notes Specs from Hewlett Packard Model 8111A Pulse/Function Generator specifications sheet (Test Equipment Depot / OEM table). Confirm Option 001 burst on the unit.

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	
Technical Specifications	
PARAMETER	VALUE
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Instrument Type	Pulse/function generator
Alias	HP 8111A; Agilent 8111A
Waveforms	sine; triangle; ramp; square; pulse; haverfunctions
Frequency Range	1.00 Hz to 20.0 MHz
Frequency Resolution	3 digits
Frequency Accuracy At 50 Percent Duty	5 percent (plus/minus 10 percent below 10 Hz)
Jitter	less than 0.1 percent plus 50 ps
Stability 1 Hour	plus/minus 0.2 percent
Stability 24 Hours	plus/minus 0.5 percent
Duty Cycle Calibrated	50 percent nominal
Duty Cycle Variable Below 1 MHz	10 percent to 90 percent
Duty Cycle Resolution	2 digits
Pulse Width Range	25.0 ns to 100 ms
Pulse Width Accuracy	plus/minus 5 percent plus/minus 2 ns
Amplitude Range Into 50 Ohm	1.6 mVpp to 16.00 Vpp
Amplitude Resolution	3 1/2 digits
Amplitude Accuracy At 1 kHz Sine Triangle	plus/minus 5 percent
Flatness Sine Triangle	plus/minus 3 percent (+10 percent -15 percent above 1 MHz)
Offset Range	0.00 mV to plus/minus 8.00 V
THD 1 Hz To 1 MHz	less than 3 percent (-30 dB)
Harmonics 1 MHz To 20 MHz	less than -26 dBc
Triangle Linearity	less than plus/minus 3 percent (less than plus/minus 1 percent below 1 MHz)
Pulse Square Transitions	less than 10 ns

PARAMETER	VALUE
Perturbations	less than plus/minus 5 percent (less than 10 percent below 0.16 Vpp)
Output Impedance	50 ohm plus/minus 5 percent
Modes	normal; trigger; gate; VCO; Option 001 burst
VCO Range	2 decades; ext 0.1 V to 10 V dc to 1 kHz
Burst Length Option 001	1 to 1999 periods
Operating Temperature	0 C to 55 C
Storage Temperature	-40 C to +75 C
Humidity	95 percent RH 0 C to 40 C
Mains	100/120/220/240 V rms +5/-10 percent; 48 to 440 Hz; 70 VA max
Net Weight	4.6 kg (10 lb)
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Specifications

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Alias	HP 8111A; Agilent 8111A
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Frequency Range	1.00 Hz to 20.0 MHz
Frequency Resolution	3 digits
Frequency Accuracy At 50 Percent Duty	5 percent (plus/minus 10 percent below 10 Hz)
Jitter	less than 0.1 percent plus 50 ps
Stability 1 Hour	plus/minus 0.2 percent
Stability 24 Hours	plus/minus 0.5 percent
Duty Cycle Calibrated	50 percent nominal
Duty Cycle Variable Below 1 MHz	10 percent to 90 percent
Duty Cycle Resolution	2 digits
Pulse Width Range	25.0 ns to 100 ms
Pulse Width Accuracy	plus/minus 5 percent plus/minus 2 ns
Amplitude Range Into 50 Ohm	1.6 mVpp to 16.00 Vpp

PARAMETER	VALUE
Amplitude Resolution	3 1/2 digits
Amplitude Accuracy At 1 kHz Sine Triangle	plus/minus 5 percent
Flatness Sine Triangle	plus/minus 3 percent (+10 percent -15 percent above 1 MHz)
Offset Range	0.00 mV to plus/minus 8.00 V
THD 1 Hz To 1 MHz	less than 3 percent (-30 dB)
Harmonics 1 MHz To 20 MHz	less than -26 dBc
Triangle Linearity	less than plus/minus 3 percent (less than plus/minus 1 percent below 1 MHz)
Pulse Square Transitions	less than 10 ns
Perturbations	less than plus/minus 5 percent (less than 10 percent below 0.16 Vpp)
Output Impedance	50 ohm plus/minus 5 percent
Modes	normal; trigger; gate; VCO; Option 001 burst
VCO Range	2 decades; ext 0.1 V to 10 V dc to 1 kHz
Burst Length Option 001	1 to 1999 periods
Operating Temperature	0 C to 55 C
Storage Temperature	-40 C to +75 C
Humidity	95 percent RH 0 C to 40 C
Mains	100/120/220/240 V rms +5/-10 percent; 48 to 440 Hz; 70 VA max
Net Weight	4.6 kg (10 lb)
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Size	89 mmHx 212.3 mmWx 345 mmDRepeatability Factor: 2.5 better than accuracy

Notes

Specs from Hewlett Packard Model 8111A Pulse/Function Generator specifications sheet (Test Equipment Depot / OEM table). Confirm Option 001 burst on the unit.

Ordering Information

OPTION	DESCRIPTION
Option 001	counted burst.

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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<https://aumictechlabs.com>

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.