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Data Sheet

August 13, 2026

AGILENT

Agilent 1168A 10GHz InfiniiMax Probe Amplifier

Amplifier Gain Family Table: 0.345 (InfiniiMax probe-amplifier table) ZIF Head Bandwidth with 1168A: 10 GHz (N5425A with N5426A tip) Operating Temperature Amplifier: 5 C to 40 C Probe Interface: AutoProbeFull Bandwidth Heads: N5380A SMA, N5381A solder-in, N5382A browser (12 GHz head family) ZIF Head Bandwidth with 1168A: 10 GHz (N5425A with N5426A tip) Operating Temperature Amplifier: 5 C to 40 C Probe Interface: AutoProbeFull Bandwidth Heads: N5380A SMA, N5381A solder-in, N5382A browser (12 GHz head family) Specs from the 1168A/1169A InfiniiMax Active Probes Quick Start / user's guide and Keysight Infiniium probe accessory catalogs. Rise-time rows differ slightly by head and document; use the N5381A/N5380A configuration stated on the calibration. Confirm installed probe heads; the amplifier alone is not a complete probe.



MODEL

Agilent 1168A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

1168A

LISTING

<https://aumictechlabs.com/products/1168a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent 1168A is a 10 GHz InfiniiMax II Series probe amplifier engineered for high-speed signal acquisition on Infiniium Series oscilloscopes. It delivers real-time bandwidth exceeding 10 GHz while maintaining tight input impedance and capacitance specifications, enabling precision measurement of high-frequency signals in challenging mechanical environments. The amplifier achieves 48 ps rise/fall time (10%–90%) and supports dynamic range up to 3.3 V peak-to-peak with DC offset capability to ± 16 V. Compatible with multiple InfiniiMax probe heads and

oscilloscope platforms, it scales system bandwidth from 8 GHz to 13 GHz depending on oscilloscope pairing.

Technical Specifications

Bandwidth and Timing

Amplifier bandwidth: >10 GHz
System bandwidth: 8 GHz (DSO/DSA90804A) | 10 GHz (DSO/DSA91204A) | 12 GHz (DSO81004A) | 13 GHz (DSO/DSA91304A, DSO80000 Series)
Rise/fall time (probe, 10%–90%): 48 ps
Rise/fall time (probe, 20%–80%): 34 ps
Rise/fall time (phase corrected, DSO90000A Series, 10%–90%): 42 ps
Rise/fall time (phase corrected, DSO90000A Series, 20%–80%): 36 ps

Input Characteristics

Differential input resistance: 50 k Ω $\pm$ 2%
Differential input capacitance: 0.21 pF
Single-ended input resistance: 25 k Ω $\pm$ 2%
Single-ended input capacitance: 0.35 pF

Voltage and Current Limits

Dynamic range: 3.3 V peak-to-peak
DC offset range: $\pm$ 16 V
Maximum voltage: $\pm$ 30 V
Operating voltage (with Wedge Probe Adapters): <40 V (dc + peak ac)
Operating current (with Wedge Probe Adapters): 0.5 A maximum

Key Features

- Sub-50 picosecond rise/fall time enables measurement of fast digital and RF transients
- Low input capacitance (0.21 pF differential) minimizes loading effects on test points
- Wide DC offset range ($\pm$ 16 V) accommodates biased signals without attenuation
- Compatibility with InfiniiMax I and II probe heads provides measurement flexibility

Compatibility & Integration

Probe Head Support

- N2839A Differential Browser
- N5380B Differential SMA Head
- N5381B Differential Solder-In Head
- N5425B Differential ZIF Head

Oscilloscope Platform

Infiniium Series oscilloscopes: DSO/DSA91204A, DSO/DSA90804A, DSO81004A, DSO/DSA91304A, DSO80000 Series, 90000X Series, 90000Q Series

Requires N5442A precision BNC adapter for InfiniiMax I/II/III+ differential probe operation with 90000Q Series

Backward compatible with InfiniiMax I probe amplifiers and heads for reduced-performance applications

1168A Characteristics / Specifications

PARAMETER	VALUE
Model	1168A
Manufacturer	Agilent / Keysight
Instrument Type	InfiniiMax II active probe amplifier
Alias	Agilent 1168A; Keysight 1168A; InfiniiMax II 10 GHz
Bandwidth Warranted	greater than 10 GHz (-3 dB) with N5381A solder-in differential head
System Bandwidth with DSO81004A	10 GHz
Related Amplifier 1169A	greater than 12 GHz (13 GHz typical)
Input Resistance Differential	50 kOhm plus/minus 2 percent
Input Resistance Single Ended	25 kOhm plus/minus 2 percent each side to ground
Input Capacitance Cm	0.09 pF (between tips)
Input Capacitance Cg	0.26 pF (each tip to ground)
Differential Mode Capacitance	0.21 pF ($C_m + C_g/2$)
Single Ended Mode Capacitance	0.35 pF ($C_m + C_g$)
Input Dynamic Range	plus/minus 1.65 V differential or single-ended
Input Common Mode DC to 100 Hz	8 V peak-to-peak
Input Common Mode Above 100 Hz	1.25 V peak-to-peak
Maximum Slew Rate Single Ended	25 V/ns
Maximum Slew Rate Differential	40 V/ns
DC Attenuation	about 3.45:1
Offset Range	plus/minus 16.0 V when probing single-ended
Offset Accuracy	less than 3 percent of setting
Zero Offset Error	less than 2 mV times DC attenuation referred to input
Noise Referred to Input	2.5 mV RMS, probe only
Propagation Delay	about 6 ns (deskewable)
Maximum Input Voltage	30 V peak, CAT I (non-destructive, each input)

PARAMETER	VALUE
ESD Tolerance	greater than 8 kV HBM from 100 pF, 300 ohm
Probe Only Rise 10 to 90 N5380A	40 ps typical (1168A)
Probe Only Rise 20 to 80 N5380A	27.5 ps typical (1168A)
Catalog Rise 10 to	48 ps (InfiniiMax accessory catalog 1168A row)
Catalog Rise 20 to	34 ps (InfiniiMax accessory catalog 1168A row)
SMA Head Input Resistance	50 ohm plus/minus 2 percent (N5380A)
Amplifier Gain Family Table	0.345 (InfiniiMax probe-amplifier table)
ZIF Head Bandwidth with 1168A	10 GHz (N5425A with N5426A tip)
Operating Temperature Amplifier	5 C to 40 C
Nonoperating Temperature	-40 C to +70 C
Probe Interface	AutoProbeFull Bandwidth Heads: N5380A SMA, N5381A solder-in, N5382A browser (12 GHz head family) Notes Specs from the 1168A/1169A InfiniiMax Active Probes Quick Start / user's guide and Keysight Infiniium probe accessory catalogs. Rise-time rows differ slightly by head and document; use the N5381A/N5380A configuration stated on the calibration. Confirm installed probe heads; the amplifier alone is not a complete probe.
Bandwidth	is greater than 10 GHz when used with the N5381A solder-in differential head. System bandwidth with a DSO81004A is 10 GHz. Probe heads are ordered separately; InfiniiMax II heads (N5380A/N5381A/N5382A) deliver full 10 GHz to the tip, while first-generation
Attenuation	about 3.45:1
Operating temperature	5 C to 40 C; heads can run wider with the extension kit

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	5 C to 40 C; heads can run wider with the extension kit
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System Bandwidth with DSO81004A	10 GHz
Related Amplifier 1169A	greater than 12 GHz (13 GHz typical)
Input Resistance Differential	50 kOhm plus/minus 2 percent
Input Resistance Single Ended	25 kOhm plus/minus 2 percent each side to ground
Input Capacitance Cm	0.09 pF (between tips)
Input Capacitance Cg	0.26 pF (each tip to ground)
Differential Mode Capacitance	0.21 pF (Cm + Cg/2)
Single Ended Mode Capacitance	0.35 pF (Cm + Cg)
Input Dynamic Range	plus/minus 1.65 V differential or single-ended
Input Common Mode DC to 100 Hz	8 V peak-to-peak
Input Common Mode Above 100 Hz	1.25 V peak-to-peak
Maximum Slew Rate Single Ended	25 V/ns
Maximum Slew Rate Differential	40 V/ns
DC Attenuation	about 3.45:1
Offset Range	plus/minus 16.0 V when probing single-ended
Offset Accuracy	less than 3 percent of setting
Zero Offset Error	less than 2 mV times DC attenuation referred to input
Noise Referred to Input	2.5 mV RMS, probe only

PARAMETER	VALUE
Propagation Delay	about 6 ns (deskewable)
Maximum Input Voltage	30 V peak, CAT I (non-destructive, each input)
ESD Tolerance	greater than 8 kV HBM from 100 pF, 300 ohm
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Probe Interface	AutoProbeFull Bandwidth Heads: N5380A SMA, N5381A solder-in, N5382A browser (12 GHz head family) Notes Specs from the 1168A/1169A InfiniiMax Active Probes Quick Start / user's guide and Keysight Infiniium probe accessory catalogs. Rise-time rows differ slightly by head and document; use the N5381A/N5380A configuration stated on the calibration. Confirm installed probe heads; the amplifier alone is not a complete probe.

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	
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Alias	Agilent 1168A; Keysight 1168A; InfiniiMax II 10 GHz
Bandwidth Warranted	greater than 10 GHz (-3 dB) with N5381A solder-in differential head
System Bandwidth with DS081004A	10 GHz
Related Amplifier 1169A	greater than 12 GHz (13 GHz typical)
Input Resistance Differential	50 kOhm plus/minus 2 percent
Input Resistance Single Ended	25 kOhm plus/minus 2 percent each side to ground
Input Capacitance Cm	0.09 pF (between tips)
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Differential Mode Capacitance	0.21 pF (Cm + Cg/2)
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Operating Temperature Amplifier	5 C to 40 C
Nonoperating Temperature	-40 C to +70 C
Probe Interface	AutoProbe I
Full Bandwidth Heads	N5380A SMA, N5381A solder-in, N5382A browser (12 GHz head family)

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Notes

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