

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 5384A 10 Hz to 225 MHz Frequency Counter

The Agilent/HP 5384A is a reciprocal-counting frequency counter covering Channel A from 10 Hz to 100 MHz and Channel B from 50 MHz to 225 MHz. OEM data sheet rows list 9 digits per second class resolution behavior, LCD display, and HP-IB as standard with optional HP-IL. RF and IF frequency measurements to 225 MHz, production frequency checks with remote alphanumeric display programming, and portable or rack bench counting with AC-coupled inputs. Channel A 1 Mohm path with X1/X20 attenuator and 100 kHz LPF Timebase Line Voltage: less than 1e-7 for plus or minus 10% variation LSD Displayed Class: 10 Hz to 1 nHz per gate-time formula Resolution Class: plus or minus 1 LSD plus gate-time trigger error term times frequency Specs from Agilent 5384A Frequency Counter data sheet Channel A/B and timebase tables. Gate-time resolution formulas are as published on the sheet.



MODEL

HP / Agilent 5384A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

5384A

LISTING

<https://aumictechlabs.com/products/5384a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 5384A is a dual-channel frequency counter covering 10 Hz to 225 MHz with up to 9-digit resolution. Channel A addresses low-frequency signals from 10 Hz to 100 MHz with 15 mVrms sensitivity at 50–100 MHz and 25 mVrms at 10–50 Hz, while Channel B extends coverage to 225 MHz with 10 mVrms sensitivity at 50–200 MHz. The instrument measures frequency,

period, ratio, and totalize functions using interpolator-enhanced reciprocal counting for cost-effective accuracy. A 10 MHz timebase with $<3 \times 10^{-7}$ per-month aging and $<5 \times 10^{-6}$ temperature stability over 0°C to 50°C ensures precise measurements across telecommunications, R&D, and automated test environments. Technical Specifications Frequency Measurement Frequency range: 10 Hz to 225 MHz Resolution: Up to 9 digits per second Measurement functions: Frequency, period, ratio, totalize Counting method: Interpolator-enhanced reciprocal counting Channel A (10 Hz – 100 MHz) Sensitivity: 15 mVrms (50–100 MHz); 25 mVrms (10–50 Hz); 45 mV pk-pk (5 ns minimum pulse width) Dynamic range: 45 mV to 4 V pk-pk Coupling: AC Impedance: 1 M Ω nominal || <25 pF (X1); 500 k Ω nominal || <25 pF (X20) Attenuator: X1 or X20; X40 below 50 Hz Low pass filter: 100 kHz (nominal 3 dB point) Trigger level control: ± 2.5 Vdc adjustable Channel B (50 MHz – 225 MHz) Sensitivity: 10 mVrms (50–200 MHz); 15 mVrms (200–225 MHz) Dynamic range: 10 mV to 1 Vrms Coupling: AC Impedance: 50 Ω nominal Attenuator: Manual X1 to X5 (0–14 dB nominal); Auto AGC mode Damage level: 350 VDC + 5 Vrms AC Timebase Frequency: 10 MHz Aging rate: $<3 \times 10^{-7}$ per month Temperature stability: $<5 \times 10^{-6}$ (0–50°C, referenced to 25°C) Line voltage stability: $<1 \times 10^{-7}$ ($\pm 10\%$ variation) Optional TCXO available for enhanced stability Display Type: Programmable alphanumeric LCD Digits: 12-digit display with variable control (3–11 digits) Key Features Dual-channel architecture covers low to high RF frequencies Extensive input conditioning with low pass filtering and manual/automatic attenuation Half-rack width form factor for benchtop, rack-mount, or field deployment Variable digit display blanks meaningless data for clean signal observation Typical Applications Telecommunications frequency verification and quality assurance Research and development prototyping and characterization Automated test equipment (ATE) systems integration

5384A Characteristics / Specifications

PARAMETER	VALUE
ChannelA Frequency Range	10 Hz to 100 MHz
ChannelA Sensitivity 50 Hz To 100 MHz	15 mVrms sine (MAIN LEVEL off)
ChannelA Sensitivity 10 Hz To 50 Hz	25 mVrms sine
ChannelA Pulse Sensitivity	45 mV pk-pk 5 ns minimum pulse width
ChannelA Dynamic Range	45 mV to 4 V pk-pk times attenuator setting
ChannelA Coupling	AC
ChannelA Impedance X	500 kohm nominal parallel less than 25 pF
ChannelA Attenuator	X1 or X20 nominal (X20 increases to X40 below 50 Hz)
ChannelA Low Pass Filter	100 kHz nominal 3 dB point
ChannelB Frequency Range	50 MHz to 225 MHz
ChannelB Sensitivity 50 To 200 MHz	10 mVrms
ChannelB Sensitivity 200 To 225 MHz	15 mVrms
ChannelB Dynamic Range	10 mV to 1 Vrms
ChannelB Impedance	50 ohm nominal
ChannelB Manual Attenuator	variable X1 to X5 (0 to 14 dB) nominal
ChannelB Damage Level	350 VDC + 5 Vrms AC
Timebase Frequency	10 MHz
Timebase Aging Rate	less than 3e-7 per month
Timebase Temperature	less than 5e-6 from 0 to 50 C referenced to 25 C
Timebase Line Voltage	less than 1e-7 for plus or minus 10% variation
LSD Displayed Class	10 Hz to 1 nHz per gate-time formula
Resolution Class	plus or minus 1 LSD plus gate-time trigger error term times frequency

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	
Specifications	
PARAMETER	VALUE
ChannelAFrequency Range	10 Hz to 100 MHz
ChannelASensitivity 50 Hz To 100 MHz	15 mVrms sine (MAIN LEVEL off)
ChannelASensitivity 10 Hz To 50 Hz	25 mVrms sine
ChannelAPulse Sensitivity	45 mV pk-pk 5 ns minimum pulse width
ChannelADynamic Range	45 mV to 4 V pk-pk times attenuator setting
ChannelACoupling	AC
ChannelAImpedance X1	1 Mohm nominal parallel less than 25 pF
ChannelAImpedance X20	500 kohm nominal parallel less than 25 pF
ChannelAAttenuator	X1 or X20 nominal (X20 increases to X40 below 50 Hz)
ChannelALow Pass Filter	100 kHz nominal 3 dB point
ChannelBFrequency Range	50 MHz to 225 MHz
ChannelBSensitivity 50 To 200 MHz	10 mVrms
ChannelBSensitivity 200 To 225 MHz	15 mVrms
ChannelBDynamic Range	10 mV to 1 Vrms
ChannelBImpedance	50 ohm nominal
ChannelBManual Attenuator	variable X1 to X5 (0 to 14 dB) nominal
ChannelBDamage Level	350 VDC + 5 Vrms AC
Timebase Frequency	10 MHz
Timebase Aging Rate	less than 3e-7 per month
Timebase Temperature	less than 5e-6 from 0 to 50 C referenced to 25 C
Timebase Line Voltage	less than 1e-7 for plus or minus 10% variation
LSD Displayed Class	10 Hz to 1 nHz per gate-time formula
Resolution Class	plus or minus 1 LSD plus gate-time trigger error term times frequency
Notes	
Specs from Agilent 5384A Frequency Counter data sheet Channel A/B and timebase tables. Gate-time resolution formulas are as published on the sheet.	

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.