

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 5383A 520 MHz Frequency Counter

The HP 5383A is a compact frequency counter covering 10 Hz to 512 MHz with a 9-digit LED display. OEM manual specifications list selectable 50 ohm and 1 Mohm input impedances with X1 and X10 attenuation, gate timing that sets the least significant digit, and a standard 10 MHz crystal time base with optional TCXO. General RF and IF frequency measurement, production test of oscillators and transmitters to about 512 MHz, portable bench counting where a small footprint is required, and ratio measurements via rear-panel ratio input. Option 001 Temperature Stability: less than ± 1 ppm, 0 to 40 C Power Requirements: 100, 120, 220, 240 V rms; 48 Hz to 440 Hz; 20 VA max Dimensions: 89 mm H x 159 mm W x 248 mm D Notes Values from HP 5383A OEM operating/specification literature (538X series). Sensitivity and absolute maximum input vary by switch position and frequency; use the manual tables for fuse-protected 50 ohm and 1 Mohm limits before connecting high-level signals.



MODEL

HP / Agilent 5383A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

5383A

LISTING

<https://aumictechlabs.com/products/5383a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 5383A is a direct-counting frequency counter delivering precise measurements from 10 Hz to 520 MHz. This benchtop instrument combines a nine-digit LED display with selectable gate times, dual input impedances, and attenuator options to support diverse measurement scenarios in electronics testing, communications, and RF applications. The counter measures frequency, period, and totalize functions with 1 Hz resolution and ± 1 count $\pm$ time base

accuracy across its full range. Technical Specifications Frequency measurement spans 10 Hz to 520 MHz with 1 Hz resolution per second of gate time. The nine-digit LED display includes an overflow indicator for out-of-range signals. Accuracy is ± 1 count $\pm$ time base accuracy, with internal time base stability at ± 1 ppm. Option 001 upgrades the oscillator to a temperature-compensated crystal (TCXO) for enhanced long-term stability. Input impedance selections are 1 M Ω (X1, X10) or 50 Ω . Sensitivity varies by impedance and frequency: 1 M Ω input requires 25 mV rms from 10 Hz to 10 MHz and 50 mV rms from 10 MHz to 520 MHz; 50 Ω input requires 25 mV rms across the full 10 Hz to 520 MHz range. Maximum input voltage is 250 V RMS, with fuse protection on the 50 Ω channel. Gate time is selectable between 0.1 s, 1 s, and 10 s. The internal time base oscillator may be monitored or replaced via rear panel connector. With Option 001, the rear connector functions exclusively as a monitor point. Key Features Nine-digit LED display with overflow indicator Dual input impedance (1 M Ω and 50 Ω) for flexible signal coupling Three measurement functions: frequency, period, and totalize Selectable gate times from 0.1 s to 10 s External or internal time base reference capability Compact form factor: 89 mm H $\times$ 160 mm W $\times$ 248 mm D; 2.2 kg net weight Wide power acceptance: 90 V to 252 V rms, 48 Hz to 440 Hz Low power consumption: 30 VA maximum Typical Applications Frequency verification and characterization in RF component testing, communications equipment commissioning, and broadcast signal monitoring where direct-count accuracy and rapid measurement cycles are essential. Compatibility & Integration Rack mounting kits available: 10851A (single unit) and 10852A (dual unit side-by-side installation). Operating temperature range is 0°C to 40°C; storage rated to -40°C to 70°C.

5383A Characteristics / Specifications

PARAMETER	VALUE
Frequency Range	10 Hz to 512 MHz
Display Digits	9 segmented LED digits
Input Impedance 50 Ohm X	Nominal 50 ohm, fuse protected
Input Impedance 1 Mohm X	1 Mohm shunted by less than 40 pF, attenuation factor of 10
Gate Time LSD at 0.1 s	10 Hz
Gate Time LSD at 1.0 s	1.0 Hz
Gate Time LSD at 10 s	0.1 Hz
Standard Time Base Frequency	10 MHz crystal oscillator
Standard Aging	less than ± 3 ppm per month
Standard Temperature Stability	less than ± 2.5 ppm, 0 to 40 C
Standard Line Voltage Effect	less than ± 0.5 ppm for $\pm 10\%$ line variation
External Frequency Standard Input	10 MHz, sensitivity 250 mV rms, impedance greater than 500 ohm
External Standard Maximum Input	10 V rms
Timebase Monitor Output	10 MHz, 200 mV peak to peak into 50 ohm when INT selected
Operating Temperature	0 C to 40 C
Power Requirements	100, 120, 220, 240 V rms; 48 Hz to 440 Hz; 20 VA max
Net Weight	2.2 kg (4.75 lb)
Shipping Weight	2.7 kg (6 lb)
Dimensions	89 mmHx 159 mmWx 248 mmD Notes Values from HP 5383A OEM operating/specification literature (538X series). Sensitivity and absolute maximum input vary by switch position and frequency; use the manual tables for fuse-protected 50 ohm and 1 Mohm limits before connecting high-level signals.
Attenuation	factor of 10

5383A Specifications

PARAMETER	VALUE
HP 5383A 520 MHz Frequency Counter	Overview
Key Features	Three input impedance selections including fused 50 ohm path
Technical Specifications	Frequency Range: 10 Hz to 512 MHz

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to 40 C
Operating Temperature	0 C to 40 C
Power Requirements	100, 120, 220, 240 V rms; 48 Hz to 440 Hz; 20 VA max
Net Weight	2.2 kg (4.75 lb)
Shipping Weight	2.7 kg (6 lb)
Dimensions	89 mmHx 159 mmWx 248 mmD Notes Values from HP 5383A OEM operating/specification literature (538X series). Sensitivity and absolute maximum input vary by switch position and frequency; use the manual tables for fuse-protected 50 ohm and 1 Mohm limits before connecting high-level signals.

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 list selectable 50 ohm and 1 Mohm input impedances with X1 and X10 attenuation, gate timing that sets the least significant digit, and a standard 10 MHz crystal time base with optional TCXO.

Applications

General RF and IF frequency measurement, production test of oscillators and transmitters to about 512 MHz, portable bench counting where a small footprint is required, and ratio measurements via rear-panel ratio input.

Key Features

Three input impedance selections including fused 50 ohm path

9-digit segmented LED display

Rear-panel ratio input 100 kHz to 10 MHz and external 10 MHz standard input

Optional Option 001 TCXO time base

Compact half-rack style enclosure

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Frequency Range	10 Hz to 512 MHz
Display Digits	9 segmented LED digits
Input Impedance 50 Ohm X1	Nominal 50 ohm, fuse protected
Input Impedance 1 Mohm X1	1 Mohm shunted by less than 40 pF
Input Impedance 1 Mohm X10	1 Mohm shunted by less than 40 pF, attenuation factor of 10
Gate Time LSD at 0.1 s	10 Hz
Gate Time LSD at 1.0 s	1.0 Hz
Gate Time LSD at 10 s	0.1 Hz
Standard Time Base Frequency	10 MHz crystal oscillator
Standard Aging	less than ±3 ppm per month
Standard Temperature Stability	less than ±2.5 ppm, 0 to 40 C
Standard Line Voltage Effect	less than ±0.5 ppm for ±10% line variation
External Frequency Standard Input	10 MHz, sensitivity 250 mV rms, impedance greater than 500 ohm
External Standard Maximum Input	10 V rms
Timebase Monitor Output	10 MHz, 200 mV peak to peak into 50 ohm when INT selected

Option 001 Aging: less than ±0.1 ppm per month

Option 001 Temperature Stability: less than ±1 ppm, 0 to 40 C

Specifications

PARAMETER	VALUE
Operating Temperature	0 C to 40 C

PARAMETER	VALUE
Power Requirements	100, 120, 220, 240 V rms; 48 Hz to 440 Hz; 20 VA max
Net Weight	2.2 kg (4.75 lb)
Shipping Weight	2.7 kg (6 lb)
Dimensions	89 mmHx 159 mmWx 248 mmD Notes

Values from HP 5383A OEM operating/specification literature (538X series). Sensitivity and absolute maximum input vary by switch position and frequency; use the manual tables for fuse-protected 50 ohm and 1 Mohm limits before connecting high-level signals.

Ordering Information

OPTION	DESCRIPTION
Option 001	TCXO time base

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.