

KEYSIGHT TECHNOLOGIES (AGILENT HP)

53132A

The Keysight (Agilent/HP) 53132A is a high-performance universal frequency counter offering exceptional resolution and speed for demanding benchtop and system applications. It features 12 digits per second frequency resolution, 150 ps time interval resolution, and built-in statistics and limit testing for automated analysis.

SPECIFICATIONS

General

Interfaces	GPIO (IEEE-488), RS-232
Display	Vacuum Fluorescent Display (VFD)

Physical

Power Supply	100-120 V (50/60/400 Hz), 220-240 V (50/60 Hz), 170 VA max
Operating Temperature	0 to 55 °C
Dimensions (W×H×D)	212.6 × 88.5 × 348.3 mm
Weight	3.1 kg

Input Characteristics (Channels 1 & 2)

Number of Channels	2 standard (plus optional Channel 3)
Frequency Range	DC to 225 MHz
Input Impedance	1 MΩ or 50 Ω (selectable)
Input Coupling	AC or DC
Low Pass Filter	100 kHz (switchable)

Frequency & Period Specifications

Frequency Resolution	12 digits per second
----------------------	----------------------

Time Interval Specifications

Single-Shot Resolution	150 ps
------------------------	--------

Timebase & Reference Oscillator

Standard Timebase Frequency	10 MHz
-----------------------------	--------

Math & Statistics

Statistics Operations	Average, Min/Max, Standard Deviation
Limit Testing	Automated limit tests

Connectivity & Interfaces

Command Set Compatibility	SCPI
---------------------------	------

Physical & Power Specifications

Form Factor	2U half-rack
-------------	--------------

Inputs & Triggering

Input Attenuation (Ch 1 & 2)	x1 or x10
Maximum Input Voltage (50 Ω)	5 Vrms
Maximum Input Voltage (1 M Ω)	350 Vdc + AC peak (DC to 2 kHz)
Input Sensitivity (DC to 100 MHz)	20 mVrms
Input Sensitivity (100 to 200 MHz)	30 mVrms
Input Sensitivity (200 to 225 MHz)	40 mVrms
Trigger Level Range (x1)	± 5.125 V
Trigger Level Resolution	5 mV

Optional Channel 3

Channel 3 Frequency Range (Option 030)	100 MHz to 3.0 GHz
Channel 3 Frequency Range (Option 050)	200 MHz to 5.0 GHz
Channel 3 Frequency Range (Option 124)	200 MHz to 12.4 GHz

Performance

Gate Time Range	1 ms to 1000 s
Measurement Rate (via GPIB)	Up to 200 measurements/s

Timebase & Reference

External Reference Input Frequencies	1 MHz, 5 MHz, or 10 MHz
Timebase Output	10 MHz (> 1 Vpp into 50 Ω)
Timebase Options	Option 001 (Medium Stability), Option 010 (High Stability), Option 012 (Ultra-High Stability)
External Reference Input Amplitude	200 mV rms to 10 V rms
Timebase Output Amplitude	> 1 V p-p into 50 Ω

Compliance

Safety Compliance	IEC 1010-1, CSA C22.2 No 1010.1, UL 3111-1
EMI/EMC Compliance	CISPR-11, EN55011 Group 1 Class A

Measurement Ranges

Time Interval Range	1 ns to 10^5 s
Period Range	4.44 ns to 10 s
Pulse Width Range	5 ns to 10^5 s
Rise / Fall Time Range	5 ns to 10^5 s
Phase Range	-180° to 360°
Totalize Capacity	0 to 10^{15}

Input Characteristics

Trigger Level Accuracy	±(15 mV + 1% of trigger level)
------------------------	--------------------------------

Option 030 / 050 / 124 (Channel 3)

Channel 3 Input Impedance	50 Ω (AC coupled)
---------------------------	-------------------

Features

Measurement Math	Scale and Offset
------------------	------------------

Power & Environmental

Power Consumption	170 VA max
Storage Temperature	-40 °C to +71 °C
Operating Humidity	Up to 95% RH at 40 °C

TECHNOLOGY

Frequency Counter

APPLICATIONS

Test and Measurement

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.