

KEYSIGHT TECHNOLOGIES (AGILENT HP)

53131A

The Keysight (formerly Agilent/HP) 53131A is a high-performance, 225 MHz two-channel universal counter capable of 10 digits per second frequency resolution and 500 ps time interval resolution. Built for both benchtop and ATE systems, it provides a comprehensive suite of measurement functions including phase, duty cycle, and peak voltage, with an optional third channel extending frequency coverage up to 12.4 GHz.

SPECIFICATIONS

General

Interfaces	GPIB standard
Display	Vacuum fluorescent

Physical

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

Measurement Functions

Limit Tests	Automated limit tests supported
Math Functions	Scale and Offset

Input Characteristics (Channels 1 & 2)

Number of Channels	2 standard (Channels 1 & 2), 1 optional (Channel 3)
Frequency Range (DC Coupled)	DC to 225 MHz
Input Impedance	1 MΩ or 50 Ω (selectable)
Coupling	AC or DC
Sensitivity (DC to 100 MHz)	20 mVrms
Sensitivity (100 MHz to 200 MHz)	30 mVrms
Sensitivity (200 MHz to 225 MHz)	40 mVrms
Damage Level (50 Ω)	5 Vrms
Input Capacitance (1 MΩ)	30 pF nominal

High Frequency Input (Optional Channel 3)

Frequency Range	Up to 12.4 GHz (frequency-option dependent)
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Measurement Specifications

Frequency/Period Resolution	10 digits/sec
Time Interval Resolution	500 ps

Frequency Range

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

Measurement Characteristics

Gate Time	1 ms to 1000 s
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Input Characteristics

Trigger Level Range	±5.125 V (±50 V with x10 attenuator)
Input Attenuation	x1 or x10
Low Pass Filter	100 kHz (switchable)

Environmental

Storage Temperature	-40 °C to +71 °C
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Time Base

External Reference Input Frequency	1 MHz, 5 MHz, or 10 MHz
Time Base Output Frequency	10 MHz

Power

Maximum Power Consumption	170 VA
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APPLICATIONS

Universal counter for precision frequency, time interval, and phase measurements in benchtop and automated test environments.

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