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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 53151A 26.5 GHz CW Microwave Frequency Counter

HP Agilent Keysight 53151A 26.5 GHz CW Microwave Frequency Counter The Agilent/Keysight 53151A extends the 53150 Series CW microwave counters to 26.5 GHz on Channel 2 while retaining the 10 Hz to 125 MHz Channel 1 input and simultaneous power measurement. Keysight 5966-3118E lists Channel 2 sensitivity to -25 dBm at 20-26.5 GHz and power accuracy ± 2.0 dB in that band. Microwave link and radar LO frequency/power verification to 26.5 GHz, portable field counter use with optional battery, and automated CW measurements over GPIB/RS-232. The Agilent/Keysight 53151A extends the 53150 Series CW microwave counters to 26.5 GHz on Channel 2 while retaining the 10 Hz to 125 MHz Channel 1 input and simultaneous power measurement. Keysight 5966-3118E lists Channel 2 sensitivity to -25 dBm at 20-26.5 GHz and power accuracy ± 2.0 dB in that band. Microwave link and radar LO frequency/power verification to 26.5 GHz, portable field counter use with optional battery, and automated CW measurements over GPIB/RS-232. Channel 2 coverage 50 MHz to 26.5 GHz with simultaneous power



MODEL

**HP / Agilent
53151A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

53151A

LISTING

<https://aumictechlabs.com/products/53151a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 53151A is a 26.5 GHz CW microwave frequency counter engineered for simultaneous frequency and power measurements across field, factory, and ATE environments. Built on a lightweight, compact platform with optional battery operation, it delivers 1 Hz resolution and integrates a zero-bias Schottky diode sampler with automatic frequency response and square-law deviation compensation. Technical Specifications Frequency Measurement Channel 1: 10 Hz to 125 MHz Channel 2 (Microwave): 50 MHz to 26.5 GHz Resolution: 1 Hz to 1 MHz, selectable; maximum 1 Hz Timebase: 10 MHz standard; optional oven timebase available Aging rate: <3 parts in 10^6 /month (standard) Power Measurement Range: 50 MHz to 26.5 GHz on Channel 2 Sensitivity: +7 dBm minimum Display options: dBm or watts Functions: Power, Power Offset, Relative Power Input Characteristics Channel 1 impedance: 1 M Ω Channel 2 impedance: 50 Ω Channel 1 maximum: 20 MHz p-p @ 10 MHz rate Channel 2 maximum: 1 MHz p-p @ 10 MHz rate Measurement & Acquisition Typical acquisition time: 100–140 ms Sample rate: User-selectable (Fast, Medium, Slow, Hold) Functions: Frequency, Relative Frequency, Frequency Offset, Arbitrary and Nulling Offsets, Measurement Averaging Display & Controls Backlit LCD SCPI-compatible programming Key Features Dual-channel architecture - low-frequency and microwave inputs on one platform Zero-bias Schottky diode sampling with automatic diode compensation 1 Hz frequency resolution across both channels Compact footprint: 238 mm W $\times$ 98 mm H $\times$ 276 mm D; 3.1 kg Optional battery operation for field portability Typical Applications Microwave signal characterization, frequency and power verification in RF systems, signal source calibration, and real-time frequency monitoring in production and service environments. Compatibility & Integration HP-IB (IEEE 488) interface RS-232 serial interface SCPI command set for automated test systems

53151A Characteristics / Specifications

PARAMETER	VALUE
Channel 1 Frequency Range Normal	10 Hz to 125 MHz
Channel 1 Frequency Range LPF Enabled	10 Hz to 50 kHz
Channel 2 Frequency Range	50 MHz to 26.5 GHz
Channel 1 Sensitivity 10 to 30 Hz	40 mVrms
Channel 1 Sensitivity 30 Hz to 125 MHz	25 mVrms
Channel 2 Sensitivity 50 to 300 MHz	-20 dBm
Channel 2 Sensitivity 0.3 to 12.4 GHz	-33 dBm
Channel 2 Sensitivity 12.4 to 18 GHz	-33 dBm
Channel 2 Sensitivity 18 to 20 GHz	-29 dBm
Channel 2 Sensitivity 20 to 26.5 GHz	-25 dBm
Channel 1 Maximum Input	2 Vrms
Channel 2 Maximum Input 50 MHz to 2 GHz	+5 dBm
Channel 2 Maximum Input Above 2 GHz	+13 dBm
Channel 2 Damage Level	+27 dBm
Residual Stability Channel	0.8 LSD rms
Power Accuracy 0.05 to 12.4 GHz	±1.5 dB
Power Accuracy 12.4 to 20 GHz	±1.5 dB
Power Accuracy 20 to 26.5 GHz	±2.0 dB
Power Resolution	0.01 dB
FM Tolerance Channel 2 FM Auto	20 MHz p-p max at 10 MHz rate
Acquisition Time Channel 2 FM Auto Typical	125 ms
Resolution	1 Hz to 1 MHz
Size WxHxD	213 × 88.5 × 300 mm
Operating Temperature	0 to 55 C

PARAMETER	VALUE
Weight Without Battery	4 kg
Interfaces	GPIB and RS-232 SCPI-1992.0
Channel 2 Connector	SMA/APC-3.5 compatible female

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 55 C
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Weight Without Battery	4 kg
Interfaces	GPIB and RS-232 SCPI-1992.0
Channel 2 Connector	SMA/APC-3.5 compatible female Notes Column values from Keysight 5966-3118E for 53151A. Confirm Option 001 oven and Option 002 battery on the specific instrument.

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
Channel 1 Frequency Range Normal	10 Hz to 125 MHz
Channel 1 Frequency Range LPF Enabled	10 Hz to 50 kHz
Channel 2 Frequency Range	50 MHz to 26.5 GHz
Channel 1 Sensitivity 10 to 30 Hz	40 mVrms
Channel 1 Sensitivity 30 Hz to 125 MHz: 25 mVrms	
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PARAMETER	VALUE
Channel 2 Sensitivity 50 to 300 MHz	-20 dBm
Channel 2 Sensitivity 0.3 to 12.4 GHz	-33 dBm
Channel 2 Sensitivity 12.4 to 18 GHz	-33 dBm
Channel 2 Sensitivity 18 to 20 GHz	-29 dBm
Channel 2 Sensitivity 20 to 26.5 GHz	-25 dBm
Channel 1 Maximum Input	2 Vrms
Channel 2 Maximum Input 50 MHz to 2 GHz: +5 dBm	
Specifications	
PARAMETER	VALUE
Channel 2 Maximum Input Above 2 GHz	+13 dBm
Channel 2 Damage Level	+27 dBm
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Power Accuracy 0.05 to 12.4 GHz	±1.5 dB
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Power Resolution	0.01 dB
FM Tolerance Channel 2 FM Auto	20 MHz p-p max at 10 MHz rate

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Acquisition Time Channel 2 FM Auto Typical	125 ms
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Interfaces	GPIB and RS-232 SCPI-1992.0
Channel 2 Connector	SMA/APC-3.5 compatible female

Notes
Column values from Keysight 5966-3118E for 53151A. Confirm Option 001 oven and Option 002 battery on the specific instrument.

Ordering Information

OPTION	DESCRIPTION
Option 001	Optional battery/DC input Option 002

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

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NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
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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.