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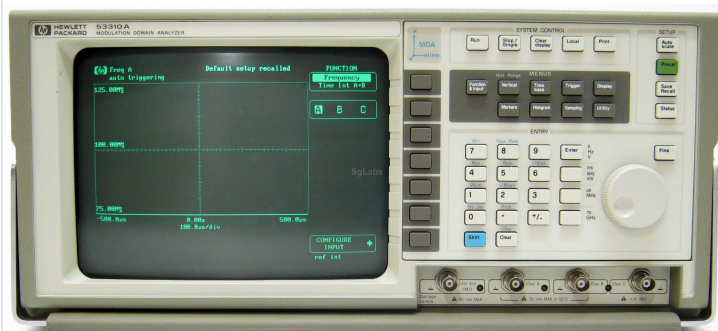
Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 53310A Modulation Domain Analyzer

HP Agilent 53310A Modulation Domain Analyzer The HP/Agilent 53310A Modulation Domain Analyzer displays frequency and time-interval versus time much like an oscilloscope displays voltage versus time. OEM specifications cover ChannelA to 200 MHz, ChannelB to 100 MHz, and optional ChannelC to 2.5 GHz (Options 030/031), with fast histogram rates and built-in jitter statistics. Jitter characterization of digital links and peripherals, frequency-hopping transmitter analysis, frequency drift studies, and cellular handoff timing measurements. The HP/Agilent 53310A Modulation Domain Analyzer displays frequency and time-interval versus time much like an oscilloscope displays voltage versus time. OEM specifications cover ChannelA to 200 MHz, ChannelB to 100 MHz, and optional ChannelC to 2.5 GHz (Options 030/031), with fast histogram rates and built-in jitter statistics. Jitter characterization of digital links and peripherals, frequency-hopping transmitter analysis, frequency drift studies, and cellular handoff timing measurements. Direct view of jitter and modulation on a large display



MODEL

**HP / Agilent
53310A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

53310A

LISTING

<https://aumictechlabs.com/products/53310a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 53310A Modulation Domain Analyzer characterizes frequency and time stability in signal sources with direct measurement of modulation and jitter performance. The instrument addresses frequency drift analysis, jitter characterization in digital communication systems, frequency hopping assessment, and cellular phone switching evaluation through automated

statistical analysis and fast histogram acquisition. Technical Specifications Input Characteristics Minimum input level (Channels A/B): 20 mV Input impedance (Channels A/B): 1 M Ω Input impedance (Channel C, Option 030/031): 50 Ω Input coupling (Channel C, Option 030/031): AC Frequency Measurement Ranges Channel A: 10 Hz to 200 MHz Channel B: 10 Hz to 100 MHz Channel C (Option 030/031): 50 MHz to 2.5 GHz Channel C Sensitivity (Option 030/031) –25 dBm (50 MHz to 1.5 GHz) –20 dBm (>1.5 GHz to 2.0 GHz) –15 dBm (>2.0 GHz to 2.5 GHz) Warranted: –13 dBm (50 MHz to 200 MHz), –17 dBm (200 MHz to 2 GHz), –12 dBm (2 GHz to 2.5 GHz) Power Handling (Channel C) Maximum input: +7 dBm; +20 dBm with Option 031 (warranted) Damage level: +15 dBm; +23 dBm with Option 031 (warranted) Data Acquisition Acquisition rate: Up to 1.5 MHz (fast histogram mode) Standard data record: 450 points; 8K measurements standard, 32K optional Fast sampling (Option 031): 8 MHz HP-IB transfer rate: Approximately 175 kBytes/s Key Features Automated statistical analysis: mean, standard deviation, probability functions, peak-to-peak deviation, min/max values Carrier frequency and modulation rate extraction Fast histogram computation with resolution improvement via averaging Advanced triggering on measurement values and frequency/time interval thresholds RF envelope trigger (Option 031): level adjustable in 100 steps (–25 dBm to 0 dBm @ 1 GHz typical) Test limit output for out-of-range measurement indication Option 031 provides high-resolution 2.5 GHz Channel C capability Typical Applications Frequency drift and stability assessment in signal sources Jitter analysis in digital communication systems Frequency hopping performance validation Cellular phone switching characterization Compatibility & Integration HP-IB (IEEE Std 488.1-1987 and IEEE Std 488.2-1987) interface with SH1, AH1, T5, TEO, LA, LEO, SR1, RLI, PPO, DC1, DTI, CO, E2 capabilities. Frequency standard input provided.

53310A Characteristics / Specifications

PARAMETER	VALUE
ChannelA Frequency Range	10 Hz to 200 MHz
ChannelB Frequency Range	10 Hz to 100 MHz
ChannelC Frequency Range Option 030 0	50 MHz to 2.5 GHz
Minimum Input Level Class	20 mV
ChannelA Sensitivity Class	20 mV rms sine to 100 MHz
ChannelC Option 030 Sensitivity to 1.5 GHz	-25 dBm
ChannelC Option 030 Sensitivity 1.5 to 2.0 GHz	-20 dBm
ChannelC Option 030 Sensitivity 2.0 to 2.5 GHz	-15 dBm
ChannelC Option 030 Maximum Input Level	+7 dBm
ChannelC Option 030 Damage Level	+15 dBm
ChannelC Option 031 Sensitivity 50 to 200 MHz	-13 dBm
ChannelC Option 031 Sensitivity 200 MHz to 2 GHz	-17 dBm
ChannelC Option 031 Sensitivity 2 to 2.5 GHz	-12 dBm
ChannelC Option 031 Maximum Input Level	+20 dBm
ChannelC Option 031 Damage Level	+23 dBm
ChannelC Impedance	50 ohm
ChannelC Coupling	AC
Positive Time Interval Range	+20 ns to +1 s
Fast Histogram Rate Frequency Modes	1.5 MHz
Other Modes Frequency Measurement Rate	1 MHz

PARAMETER	VALUE
Fast Histogram Rate Time Interval	2.5 MHz
Other Modes Time Interval Rate	1.25 MHz
External LO Input Level Option 0	+6 dBm +/-1 dB
External LO Frequency Range Option 0	150 MHz to 2.5 GHz
RF Burst Width Option 031 Class	50 us to CW Notes Specs from Agilent 53310A Modulation Domain Analyzer product specifications. ChannelCperformance depends on Option 030 versus 031; confirm installed options on the unit.

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 cover ChannelAto 200 MHz, ChannelBto 100 MHz, and optional ChannelCto 2.5 GHz (Options 030/031), with fast histogram rates and built-in jitter statistics.

Applications
Jitter characterization of digital links and peripherals, frequency-hopping transmitter analysis, frequency drift studies, and cellular handoff timing measurements.

Key Features
Direct view of jitter and modulation onalarge display
Automated mean, standard deviation, and probability analysis
Continuous frequency measurements without losing relationships
Advanced triggering on frequency or time-interval values
Options for oven timebase, extended memory, and 2.5 GHz ChannelC Technical Specifications

Options for oven timebase, extended memory, and 2.5 GHz ChannelC Technical Specifications

PARAMETER	VALUE
ChannelAFrequency Range	10 Hz to 200 MHz
ChannelBFrequency Range	10 Hz to 100 MHz
ChannelCFrequency Range Option 030 031	50 MHz to 2.5 GHz
Minimum Input Level Class	20 mV
ChannelABSensitivity Class	20 mV rms sine to 100 MHz
ChannelCOption 030 Sensitivity to 1.5 GHz	-25 dBm
ChannelCOption 030 Sensitivity 1.5 to 2.0 GHz	-20 dBm
ChannelCOption 030 Sensitivity 2.0 to 2.5 GHz	-15 dBm
ChannelCOption 030 Maximum Input Level	+7 dBm
ChannelCOption 030 Damage Level	+15 dBm
ChannelCOption 031 Sensitivity 50 to 200 MHz	-13 dBm

ChannelCOption 031 Sensitivity 200 MHz to 2 GHz: -17 dBm

Specifications

PARAMETER	VALUE
ChannelCOption 031 Sensitivity 2 to 2.5 GHz	-12 dBm
ChannelCOption 031 Maximum Input Level	+20 dBm
ChannelCOption 031 Damage Level	+23 dBm

PARAMETER	VALUE
ChannelCImpedance	50 ohm
ChannelCCoupling	AC
Positive Time Interval Range	+20 ns to +1 s
Fast Histogram Rate Frequency Modes	1.5 MHz
Other Modes Frequency Measurement Rate	1 MHz
Fast Histogram Rate Time Interval	2.5 MHz
Other Modes Time Interval Rate	1.25 MHz
External L0 Input Level Option 031	+6 dBm +/-1 dB
External L0 Frequency Range Option 031	150 MHz to 2.5 GHz

Option 001 Memory: Extended measurement memory 4x

Option 010 Timebase: High stability oven timebase

RF Burst Width Option 031 Class: 50 us to CW

Notes

Specs from Agilent 53310A Modulation Domain Analyzer product specifications. ChannelCperformance depends on Option 030 versus 031; confirm installed options on the unit.

Ordering Information

OPTION	DESCRIPTION
Option 030	031: 50 MHz to 2.5 GHz
Option 031	Sensitivity 50 to 200 MHz: -13 dBm
Option 001	Memory: Extended measurement memory 4x
Option 010	Timebase: High stability oven timebase

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

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NIST-traceable calibration · SAM registered ·
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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.