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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 5343A Microwave Frequency Counter

HP Agilent 5343A Microwave Frequency Counter 26.5 GHz The HP 5343A is an automatic CW microwave frequency counter covering 10 Hz to 26.5 GHz with an 11-digit display and keyboard math/offset functions. Published product specifications cite two inputs (10 Hz-500 MHz and 500 MHz-26.5 GHz), sensitivity on the order of -30 dBm at 12.4 GHz to -18 dBm at 26.5 GHz, +7 dBm maximum input, and 50 ohm APC-3.5 microwave connector, with optional HP-IB and high-stability timebase. Communications and radar CW frequency measurement with high FM tolerance, automatic microwave counter to 26.5 GHz, and system frequency monitoring with optional GPIB. The HP 5343A is an automatic CW microwave frequency counter covering 10 Hz to 26.5 GHz with an 11-digit display and keyboard math/offset functions. Published product specifications cite two inputs (10 Hz-500 MHz and 500 MHz-26.5 GHz), sensitivity on the order of -30 dBm at 12.4 GHz to -18 dBm at 26.5 GHz, +7 dBm maximum input, and 50 ohm APC-3.5 microwave connector, with optional HP-IB and high-stability timebase. Communications and radar CW frequency measurement with high FM tolerance, automatic microwave counter to 26.5 GHz, and system frequency monitoring with optional GPIB.



MODEL

HP / Agilent 5343A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

5343A

LISTING

<https://aumictechlabs.com/products/5343a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 5343A Microwave Frequency Counter measures microwave frequencies from 10 Hz to 26.5 GHz with 11-digit resolution and 1 Hz minimum step. Engineered for telecommunications, radar, scientific research, and RF testing applications, this microprocessor-controlled instrument delivers high-accuracy frequency determination across a broad spectral range. Dual input channels support 10 Hz to 500 MHz and 500 MHz to 26.5 GHz measurements with automatic operation for CW signals above 500 MHz. Sensitivity reaches -30 dBm at 12.4 GHz, with high FM tolerance accommodating carrier deviations to 50 MHz peak-to-peak. Technical Specifications Frequency Range: 10 Hz to 26.5 GHz (two input ranges: 10 Hz–500 MHz and 500 MHz–26.5 GHz) Resolution: 11-digit display; selectable 1 Hz to 1 MHz resolution Sensitivity: -30 dBm @ 12.4 GHz; -35 dBm minimum measurable signal; -33 dBm (500 MHz–12.4 GHz); -28 dBm (12.4–18 GHz); -23 dBm (18–26.5 GHz) Input Impedance: 50 ohm nominal with selectable 50 ohm and 1 megohm attenuation Input 2: 10 MHz to 520 MHz, 50 ohm; dynamic range -17 dBm to +20 dBm; damage level +24 dBm Maximum Operating Level: +22 dBm (500 MHz–18 GHz); +34.8 dBm (3 W, 18–26.5 GHz) VSWR: <2:1 typical (amplitude); <5:1 typical (frequency); <1.8:1 (500 MHz–10 GHz); <3:1 (10–26.5 GHz) FM Tolerance: 50 MHz peak-to-peak carrier deviation Measurement Time: 100 ms plus frequency measurement time Time Base Aging: $<1 \times 10^{-7}$ /month; Temperature stability $\pm 1 \times 10^{-6}$ (0–50°C); Short-term $<1 \times 10^{-9}$ (1 second averaging) Display: 11-digit sectionalized readout; simultaneous frequency (to 1 MHz resolution) and level Key Features Automatic measurement capability for 500 MHz–26.5 GHz CW signals Selectable display resolution from 1 Hz to 1 MHz High stability time base option (Option 001) available HP-IB compatibility with Option 011 for full-resolution frequency output Portable design with microprocessor intelligence Typical Applications Telecommunications system characterization Radar frequency verification Scientific RF measurements General microwave test and verification Compatibility & Integration HP-IB interface support enables automated system integration. Optional high-stability time base (Option 001) provides aging rate $<5 \times 10^{-10}$ /day with temperature stability $<7 \times 10^{-9}$ (0–50°C).

5343A Characteristics / Specifications

PARAMETER	VALUE
Frequency Range Overall	10 Hz to 26.5 GHz
Channel Low Frequency Range	10 Hz to 500 MHz
Channel Microwave Frequency Range	500 MHz to 26.5 GHz
Display Digits	11 digit LED
Resolution Selectable	1 Hz to 1 MHz
Sensitivity At 12.4 GHz	-30 dBm
Sensitivity At 18 GHz	-24 dBm
Sensitivity At 26.5 GHz	-18 dBm
Maximum Input Power	+7 dBm
Input Impedance Microwave	50 ohm
Microwave Connector	APC-3.5 male with collar
FM Tolerance Class	up to 50 MHz peak-to-peak carrier deviation class
Timebase Standard	10 MHz crystal
Low Channel Impedance Selectable Class	50 ohm and 1 M Ω
Measurement Type	Automatic CW frequency
Form Factor	Portable microwave counter
Low Channel Connector Class	BNC
Math Functions	keyboard offsets including IF offset

5343A Specifications

PARAMETER	VALUE
HP Agilent 5343A Microwave Frequency Counter 26.5 GHz	Overview
Key Features	Automatic CW measurement 500 MHz to 26.5 GHz without manual heterodyne tuning
High FM tolerance suitable for communications carriers	11-digit sectionalized LED display with 1 Hz to 1 MHz selectable resolution
Technical Specifications	Frequency Range Overall: 10 Hz to 26.5 GHz

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 cite two inputs (10 Hz-500 MHz and 500 MHz-26.5 GHz), sensitivity on the order of -30 dBm at 12.4 GHz to -18 dBm at 26.5 GHz, +7 dBm maximum input, and 50 ohm APC-3.5 microwave connector, with optional HP-IB and high-stability timebase.

Applications

Communications and radar CW frequency measurement with high FM tolerance, automatic microwave countering to 26.5 GHz, and system frequency monitoring with optional GPIB.

Key Features

Automatic CW measurement 500 MHz to 26.5 GHz without manual heterodyne tuning

High FM tolerance suitable for communications carriers

11-digit sectionalized LED display with 1 Hz to 1 MHz selectable resolution

Keyboard math including IF offset functions

Optional HP-IB, oven timebase, limiter, and DAC

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Frequency Range Overall	10 Hz to 26.5 GHz
Channel Low Frequency Range	10 Hz to 500 MHz
Channel Microwave Frequency Range	500 MHz to 26.5 GHz
Display Digits	11 digit LED
Resolution Selectable	1 Hz to 1 MHz
Sensitivity At 12.4 GHz	-30 dBm
Sensitivity At 18 GHz	-24 dBm
Sensitivity At 26.5 GHz	-18 dBm
Maximum Input Power	+7 dBm
Input Impedance Microwave	50 ohm
Microwave Connector	APC-3.5 male with collar
FM Tolerance Class	up to 50 MHz peak-to-peak carrier deviation class
Timebase Standard	10 MHz crystal
Low Channel Impedance Selectable Class	50 ohm and 1 MΩ

Option 001: High stability timebase

Option 006: Limiter input protection

Option 011: Digital I/O GPIB interface

Option 004: Digital-to-analog converter

Specifications

PARAMETER	VALUE
Measurement Type	Automatic CW frequency
Form Factor	Portable microwave counter
Low Channel Connector Class	BNC
Math Functions	keyboard offsets including IF offset

Notes

Numeric sensitivity and range values from HP/Agilent 5343A product specification summaries. Full operating/service manual 05343-90007 remains authoritative for detailed uncertainty and timebase tables foragiven serial prefix.

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.