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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 83594A RF plug-in provides a 2 to 26.5 GHz broadband coaxial swept frequency

The HP 83594A is a broadband coaxial RF plug-in for the 8350B covering 2.0 to 26.5 GHz using switched YIG-tuned multiplier technology. RF output is APC-3.5 male. Minimum sweep time is 10 ms single band and 30 ms full sweep. Auxiliary fundamental oscillator output is 2.0 to 7.0 GHz at nominally 0 dBm. Option 002 provides a 55 dB step attenuator. Broadband scalar and swept measurements 2 to 26.5 GHz; CW stimulus; LO substitution; ATE with HP-IB programmable power and frequency. Manufacturer: Hewlett Packard / Agilent / Keysight
Instrument Type: Sweep oscillator RF plug-in (requires 8350B) Alias: HP 83594A; Agilent 83594A; Keysight 83594A Power Sweep Calibrated Range: greater than 15 dB (greater than 9 dB with Option 002)



MODEL

**HP / Agilent
83594A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83594A

LISTING

<https://aumictechlabs.com/products/83594a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 83594A is a broadband coaxial swept frequency RF plug-in operating from 2 to 26.5 GHz within the Agilent 8350B sweep oscillator mainframe. This source delivers continuous coverage across four internal bands with internally leveled output, making it suitable for microwave system development, receiver testing, component characterization, scalar network

analysis, and local oscillator applications requiring down-conversion of high-frequency signals.

Technical Specifications

Frequency Range 2 GHz to 26.5 GHz across four internal bands: 2.0–7.0 GHz, 6.9–13.5 GHz, 13.4–20.0 GHz, 19.9–26.5 GHz

Broadband switch points at approximately 2.4 GHz, 7.0 GHz, 13.5 GHz, and 20.0 GHz

Power Output Minimum output power: 10 dBm (internally leveled within 0.9 dB) Minimum settable level: -5 dBm Option 002 extends dynamic range to -60 dBm via 55 dB step attenuator

Display resolution: 0.1 dB

Amplitude control range: typically 15 dB

Amplitude sensitivity: 1 dB/V typical (maximum input 15 V)

Output Connector Type APC 3.5 male

Slope Compensation Calibrated range: up to 0.5 dB/GHz (10 dB over full range)

Linearity: <0.3 dB typical

Resolution: 0.1 dB/GHz

Modulation External FM: ± 75 MHz (DC–100 Hz), ± 7 MHz (100 Hz–1 MHz), ± 5 MHz (1–2 MHz), ± 1 MHz (2–10 MHz)

External AM: 100 kHz frequency response typical, ~ 10 k Ω input impedance

Auxiliary Outputs Fundamental oscillator output (2.0–7.0 GHz): nominally 0 dBm

Frequency reference output: nominal 1 V/GHz (2–19 GHz) via rear panel BNC

Sweep Performance Minimum single-band sweep time: 10 ms Full-band sweep time: 25 ms

Control & Integration HP-IB programmability with 0.02 dB power level resolution

Power meter leveling compatible with HP 432A/B/C, 436A, and 438A

Key Features Excellent harmonic performance

Completely programmable for automatic test systems

Four-band architecture optimized for broadband coverage

Power meter leveling capability

Typical Applications Microwave system development and characterization

Receiver testing and validation

Component and subsystem characterization

Scalar network analysis

High-frequency local oscillator for down-conversion

Compatibility & Integration Designed exclusively for the Agilent 8350B sweep oscillator mainframe.

Dimensions: 12 × 10 × 8 in; **Weight:** 10 lbs.

Features & description

From manufacturer datasheet

Features

- 2.0 to 26.5 GHz single-sweep coaxial coverage • APC-3.5 male RF output • Auxiliary 2.0 to 7.0 GHz fundamental output • Power sweep and slope; 0.1/0.01 dB power resolution • Option 002 55 dB step attenuator; Option 004 rear RF

83594A Characteristics / Specifications

PARAMETER	VALUE
Model	83594A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Sweep oscillator RF plug-in (requires 8350B)
Alias	HP 83594A; Agilent 83594A; Keysight 83594A
Frequency Range	2.0 to 26.5 GHz
Power Display Resolution	0.1 dB
Power Programmable Resolution	0.01 dB
Power Sweep Calibrated Range	greater than 15 dB (greater than 9 dB with Option 002)
Power Sweep Accuracy Typical	1.5 dB
Power Slope Calibrated Range	up to 5 dB/GHz; up to 15 dB (9 dB with Option 002) full sweep
Power Slope Linearity Typical	0.2 dB (0.3 dB with Option 002)
Residual AM In 100 kHz BW Typical	-50 dBc
Source Output VSWR	less than 1.9 (50 ohm nominal) family
Minimum Sweep Time Single Band	10 ms
Minimum Sweep Time Full Band	30 ms
Auxiliary Output	2.0 to 7.0 GHz fundamental oscillator; nominally 0 dBm
Frequency Reference Output	1 V/GHz or 0.5 V/GHz; plus/minus 25 mV
RF Output Connector	APC 3.5 male
Net Weight	5.7 kg (12.45 lb)
Shipping Weight	8.75 kg (19.25 lb)
Mainframe Compatibility	8350B
Related Start From 10 MHz	83595A 0.01 to 26.5 GHz
Related To 20 GHz	83590A 2 to 20 GHz
Internal Leveling Flatness Family	within 0.9 dB class
External AM Response Family Typical	100 kHz; 15 dB; 1 dB/V

PARAMETER

VALUE

Operating Temperature With Mainframe

0 to 55 C

Operating temperature

With Mainframe: 0 to 55 C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	With Mainframe: 0 to 55 C
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Operating Temperature With Mainframe	0 to 55 C Notes Rows from HP 8350B / 83590-series catalog for 83594A. Band-by-band maximum leveled power must be taken from the specific 83594A power table on the unit datasheet revision; do not copy 83595A +4 dBm onto this model without verification.

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	
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Residual AM In 100 kHz BW Typical	-50 dBc
Source Output VSWR	less than 1.9 (50 ohm nominal) family
Minimum Sweep Time Single Band	10 ms
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Auxiliary Output	2.0 to 7.0 GHz fundamental oscillator; nominally 0 dBm
Frequency Reference Output	1 V/GHz or 0.5 V/GHz; plus/minus 25 mV
RF Output Connector	APC 3.5 male
Net Weight	5.7 kg (12.45 lb)
Shipping Weight	8.75 kg (19.25 lb)
Option 002: rear panel RF output Option 004 Attenuator: 55 dB step attenuator	
Specifications	
PARAMETER	VALUE
Mainframe Compatibility	8350B
Related Start From 10 MHz	83595A 0.01 to 26.5 GHz

PARAMETER	VALUE
Related To 20 GHz	83590A 2 to 20 GHz
Internal Leveling Flatness Family	within 0.9 dB class
External AM Response Family Typical	100 kHz; 15 dB; 1 dB/V
Operating Temperature With Mainframe	0 to 55 C

Notes

Rows from HP 8350B / 83590-series catalog for 83594A. Band-by-band maximum leveled power must be taken from the specific 83594A power table on the unit datasheet revision; do not copy 83595A +4 dBm onto this model without verification.

Ordering Information

OPTION	DESCRIPTION
Option 002	provides a 55 dB step attenuator.
Option 004	Attenuator: 55 dB step attenuator

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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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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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.