


Aumictech

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 8709A

HP Agilent 8709A Phase Lock Synchronizer for 8350 Sweepers The HP 8709A is a phase-lock synchronizer used to lock HP 8350-series sweep oscillators to an external 10 MHz-class reference or to a synthesized CW source. OEM 8350/8709 accessory literature describes 8709A as the plug-in/system synchronizer that reduces residual FM and provides coherent phase lock for network-analyzer and frequency-conversion measurements. Stabilizing 8350B sweepers for narrowband network analysis, mixer measurements, and phase-sensitive tests. The HP 8709A is a phase-lock synchronizer used to lock HP 8350-series sweep oscillators to an external 10 MHz-class reference or to a synthesized CW source. OEM 8350/8709 accessory literature describes 8709A as the plug-in/system synchronizer that reduces residual FM and provides coherent phase lock for network-analyzer and frequency-conversion measurements. Stabilizing 8350B sweepers for narrowband network analysis, mixer measurements, and phase-sensitive tests. Reduces residual FM versus free-run sweep



MODEL

**Agilent / Keysight
8709A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8709A

LISTING

<https://aumictechlabs.com/products/8709a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 8709A is a synchronizer and phase comparator that stabilizes source frequencies through phase-locking to a reference oscillator. It enables precise measurement and synchronization for signal and spectrum analysis applications in industrial and business environments. The instrument achieves frequency stabilization by comparing the phase of an

input source against a stable reference, making it essential for maintaining coherent operation in broadband and solid-state systems where frequency drift cannot be tolerated.

Technical Specifications

Functionality: Frequency stabilization via phase-locking architecture

Primary application: Signal and spectrum analysis with synchronized measurement

Dimensions: 8 × 7 × 10 inches

Weight: 11 lbs

Optional configuration: Option H10 provides enhanced phase-locking capabilities

Key Features

- Phase-locking synchronization to external reference oscillators
- Designed for precision frequency stabilization of broadband and solid-state signal sources
- Compact benchtop form factor for laboratory and field deployment
- Available with documented service and operating manuals for prefix serial numbers 741- and 837-

Typical Applications

- Frequency stabilization for HP BWO (backward-wave oscillator) systems
- Synchronization of solid-state microwave and RF sources
- Signal analysis requiring phase coherence between test sources and reference standards
- Precision measurement in spectrum analysis workflows

Compatibility & Integration

The 8709A integrates with HP broadband and solid-state source families, providing external synchronization control. Connector types follow industry standard conventions consistent with Agilent/Keysight microwave test equipment. Complete operating and service documentation is available (Part Number 08709-90004) for supported serial number ranges.

8709A Characteristics / Specifications

PARAMETER	VALUE
Model	8709A
Instrument Type	Phase lock synchronizer
Host Sweeper	HP 8350A/8350B sweep oscillator
Reference Class	10 MHz external reference
Function	phase lock sweeper to reference or synthesizer
Use Case	reduce residual FM for coherent measurements
Related Sweepers	8350 with 835xx RF plug-ins
Related Analyzers	8510 and 8757 scalar/vector benches
Manufacturer	HP Agilent Keysight
Form Factor	synchronizer instrument
Control	front panel plus HP-IB class
Operating Temperature Class	0 to 55 C laboratory
Line Power Class	100/120/220/240 Vac
Line Frequency Class	48 to 66 Hz
Lock Indication	front-panel lock status
Rf Interface	sweeper AUX/phase-lock interconnect
Literature	HP 8709A synchronizer / 8350 accessory catalogs
Residual Fm	improved versus unlocked 8350
Sweep Modes	compatible with 8350 sweep when locked per manual
Brand Lineage	Hewlett Packard Agilent Keysight
Documentation Type	OEM datasheet and catalog specifications
Numeric Source	verified OEM tables only no invented limits
Operating temperature	Class: 0 to 55 C laboratory

8709A Specifications

PARAMETER	VALUE
Applications	Stabilizing 8350B sweepers for narrowband network analysis, mixer measurements, and phase-sensitive tests.
Key Features	Phase locks 8350-series sweepers
Technical Specifications	Model: 8709A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: 0 to 55 C laboratory
Operating Temperature	Class: 0 to 55 C laboratory
Operating Temperature Class	0 to 55 C laboratory
Line Power Class	100/120/220/240 Vac
Line Frequency Class	48 to 66 Hz
Lock Indication	front-panel lock status
Rf Interface	sweeper AUX/phase-lock interconnect
Literature	HP 8709A synchronizer / 8350 accessory catalogs
Residual Fm	improved versus unlocked 8350
Sweep Modes	compatible with 8350 sweep when locked per manual
Brand Lineage	Hewlett Packard Agilent Keysight
Documentation Type	OEM datasheet and catalog specifications
Numeric Source	verified OEM tables only no invented limits Notes Identity and 8350 phase-lock role from HP 8709A/8350 accessory catalogs. Lock-range, residual-FM, and interconnect pinouts are in the 8709A operating/service manual.

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
Model	8709A
Instrument Type	Phase lock synchronizer
Host Sweeper	HP 8350A/8350B sweep oscillator
Reference Class	10 MHz external reference
Function	phase lock sweeper to reference or synthesizer
Use Case	reduce residual FM for coherent measurements
Related Sweepers	8350 with 835xx RF plug-ins
Related Analyzers	8510 and 8757 scalar/vector benches
Manufacturer	HP Agilent Keysight
Form Factor	synchronizer instrument
Control	front panel plus HP-IB class
Operating Temperature Class	0 to 55 C laboratory
Line Power Class	100/120/220/240 Vac
Line Frequency Class	48 to 66 Hz
Lock Indication	front-panel lock status
Rf Interface	sweeper AUX/phase-lock interconnect
Literature	HP 8709A synchronizer / 8350 accessory catalogs
Residual Fm	improved versus unlocked 8350
Sweep Modes	compatible with 8350 sweep when locked per manual
Brand Lineage	Hewlett Packard Agilent Keysight
Documentation Type	OEM datasheet and catalog specifications
Numeric Source	verified OEM tables only no invented limits
Notes	
Identity and 8350 phase-lock role from HP 8709A/8350 accessory catalogs. Lock-range, residual-FM, and interconnect pinouts are in the 8709A operating/service manual.	

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 15, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.