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Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 8505A

The Keysight 8505A is an integrated RF network analyzer covering 500 kHz to 1.3 GHz in three sweep ranges. It combines a swept source and dual-channel receiver to measure magnitude, phase, group delay, and complex impedance of coaxial components and semiconductors. RF amplifier filter and cable characterization, active/passive two-port measurements with 8503A S-parameter test set, and production RF component test to 1.3 GHz. Five hundred kHz to 1.3 GHz coverage in three ranges Direct group delay and deviation-from-linear-phase displays Ratio Frequency Response: plus or minus 1.5 dB class Phase Frequency Response 0.5 To 750 MHz: plus or minus 3 degrees class Group Delay Frequency Response: plus or minus 1 ns from 500 kHz to 1.3 GHz class Numeric rows from HP Journal July 1976 abridged 8505A specifications and contemporary OEM product summaries. Values marked class follow published abridged tables.



MODEL

**Agilent / Keysight
8505A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8505A

LISTING

<https://aumictechlabs.com/products/8505a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8505A is a calibration kit engineered to establish and verify the accuracy of high-frequency network analyzers and related test instruments. It delivers a complete set of characterized calibration standards - opens, shorts, loads, and thru elements - enabling precise one-port and two-port calibrations across demanding laboratory and production environments. Technical Specifications Calibration Standards The kit includes male and female

open circuits, short circuits, and 50 Ohm loads (both fixed and sliding variants). Thru standards support two-port calibration procedures. Attenuators and mismatched airlines are available in select configurations for specialized calibration techniques. Included Accessories Torque wrenches ensure proper connection force during standard installation. Adapter wrenches, connector gages, and adapter kits facilitate assembly and interface verification. A storage case provides organization and protection.

Key Features

- Supports SOLT (Short-Open-Load-Thru) calibration methodology for single and dual-port applications
- Enables TRL (Thru-Reflect-Line) calibration for enhanced accuracy in specialized measurement scenarios
- Male and female standard variants accommodate diverse connector configurations
- Precision torque tools maintain repeatable connection integrity
- Portable storage accommodates field and bench deployment

Typical Applications

The 8505A addresses calibration requirements in RF and microwave measurement labs, production test facilities, and field service environments. It is suited for validation of S-parameter measurements, impedance analysis, and network characterization across high-frequency bands.

Compatibility & Integration

Connector type and frequency range depend on the specific 8505A sub-model. Related kits in the Agilent/Keysight family (85050A, 85052D, 85054B, 85055A, 85059A) span 7mm, 3.5mm, and Type-N connectors with frequency coverage from DC to 110 GHz. Consult model-specific documentation to confirm configuration.

8505A Characteristics / Specifications

PARAMETER	VALUE
Model	8505A
Instrument Type	RF network analyzer
Frequency Range Overall	500 kHz to 1.3 GHz
Frequency Range Band	500 kHz to 130 MHz
Swept Frequency Accuracy Linear Sweep	plus or minus 1 percent of range class
Time Base Accuracy	plus or minus 5 ppm plus or minus 1 ppm perCplus or minus 3 ppm per 90 days class
Frequency Stability	less than 0.01 percent of reading plus 0.01 percent of range class
Power Output Range	+10 dBm to -72 dBm class
Leveling Flatness	plus or minus 0.5 dB from 500 kHz to 1.3 GHz class
Source Impedance Return Loss	greater than 16 dB at +10 dBm class
Magnitude Range	+10 dBm to -110 dBm class
Absolute Frequency Response Magnitude	plus or minus 1.5 dB class
Ratio Frequency Response	plus or minus 1.5 dB class
Phase Range	plus or minus 180 degrees
Phase Frequency Response 0.5 To 750 MHz	plus or minus 3 degrees class
Input Connectors	TypeNfemale
Dynamic Range Class	100 dB
Group Delay Frequency Response	plus or minus 1 ns from 500 kHz to 1.3 GHz class
Companion Storage Normalizer	8501A
CompanionSParameter Test Set	8503A
Return loss	greater than 16 dB at +10 dBm class

8505A Specifications

PARAMETER	VALUE
Keysight 8505A RF Network Analyzer	Overview
Key Features	Five hundred kHz to 1.3 GHz coverage in three ranges
Integrated swept source and receiver in one instrument	Works with 8501A storage normalizer and 50/75 ohm test sets
Technical Specifications	Model: 8505A

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	8505A
Instrument Type	RF network analyzer
Frequency Range Overall	500 kHz to 1.3 GHz
Frequency Range Band 1	500 kHz to 13 MHz
Frequency Range Band 2	500 kHz to 130 MHz
Frequency Range Band 3	500 kHz to 1.3 GHz
Swept Frequency Accuracy Linear Sweep	plus or minus 1 percent of range class
Time Base Accuracy	plus or minus 5 ppm plus or minus 1 ppm perCplus or minus 3 ppm per 90 days class
Frequency Stability	less than 0.01 percent of reading plus 0.01 percent of range class
Power Output Range	+10 dBm to -72 dBm class
Leveling Flatness	plus or minus 0.5 dB from 500 kHz to 1.3 GHz class
Source Impedance Return Loss	greater than 16 dB at +10 dBm class
Harmonics At +10 dBm: greater than 25 dB below main signal class	
Specifications	
PARAMETER	VALUE
Magnitude Range	+10 dBm to -110 dBm class
Absolute Frequency Response Magnitude	plus or minus 1.5 dB class
Ratio Frequency Response	plus or minus 1.5 dB class
Phase Range	plus or minus 180 degrees
Phase Frequency Response 0.5 To 750 MHz	plus or minus 3 degrees class
Input Connectors	TypeNfemale
Dynamic Range Class	100 dB
Group Delay Frequency Response	plus or minus 1 ns from 500 kHz to 1.3 GHz class
Companion Storage Normalizer	8501A
CompanionSParameter Test Set	8503A

Notes

Numeric rows from HP Journal July 1976 abridged 8505A specifications and contemporary OEM product summaries.
Values marked class follow published abridged tables.

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