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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 4396A

Agilent 4396A Network Spectrum Impedance Analyzer The HP 4396A is a combination RF vector network, spectrum, and optional impedance analyzer to 1.8 GHz. OEM HP 4396A product technical data lists network mode 100 kHz to 1.8 GHz with 1 MHz resolution and minus 60 to +20 dBm source power, spectrum mode 2 Hz to 1.8 GHz with 1 Hz to 3 MHz RBW, ± 0.05 dB / ± 0.3 deg dynamic NA accuracy, and minus 150 dBm/Hz sensitivity. Amplifier gain, delay, and distortion on one box; filter S-parameters with test set; optional RF impedance with Option 010 and 43961A. The HP 4396A is a combination RF vector network, spectrum, and optional impedance analyzer to 1.8 GHz. OEM HP 4396A product technical data lists network mode 100 kHz to 1.8 GHz with 1 MHz resolution and minus 60 to +20 dBm source power, spectrum mode 2 Hz to 1.8 GHz with 1 Hz to 3 MHz RBW, ± 0.05 dB / ± 0.3 deg dynamic NA accuracy, and minus 150 dBm/Hz sensitivity. Amplifier gain, delay, and distortion on one box; filter S-parameters with test set; optional RF impedance with Option 010 and 43961A. Simultaneous network and spectrum split-screen display

**MODEL****Agilent / Keysight
4396A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****4396A****LISTING**<https://aumictechlabs.com/products/4396a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 4396A is a three-function RF test instrument combining vector network analyzer, spectrum analyzer, and optional impedance analyzer capabilities in a single platform. It delivers comprehensive RF component and system characterization across 100 kHz to 1.8 GHz for

network analysis and 2 Hz to 1.8 GHz for spectrum analysis, with simultaneous dual-channel display for split-screen viewing of transmission, reflection, and spectral data.

Technical Specifications

Network Analyzer Mode Frequency range: 100 kHz to 1.8 GHz Frequency resolution: 1 mHz Dynamic magnitude accuracy: ± 0.05 dB Dynamic phase accuracy: ± 0.3 degrees Source output power: -60 dBm to +20 dBm Source power resolution: 0.1 dB Measurements: Gain, phase, group delay, distortion, spurious, carrier-to-noise, noise, and reflection parameters (return loss, SWR, S-parameters with external test set)

Spectrum Analyzer Mode Frequency range: 2 Hz to 1.8 GHz Resolution bandwidth: 1 Hz to 3 MHz (1-3-10 sequence) Overall level accuracy: ± 1.0 dB Sensitivity (DANL): -150 dBm/Hz at 10 MHz; -147 dBm/Hz at 1 GHz Noise sidebands: Below -105 dBc/Hz at 10 kHz offset (carriers below 1 GHz) Measurements: Gain, phase, group delay, distortion, spurious, carrier-to-noise, noise

Key Features Color CRT display with dual independent channels for simultaneous waveform viewing Synthesized source with 0.1 dB power resolution and -60 to +20 dBm output range HP-IB (IEEE 488) interface for remote control and automation HP Instrument BASIC automation option (e.g., 1C2 configuration) Built-in disk drive and RAM storage for measurement data Digital I/O port for external system integration Optional impedance measurement function with 43961A test kit compatibility

Typical Applications RF component characterization, filter and amplifier testing, transmission line analysis, noise figure measurements, distortion quantification, and S-parameter extraction in laboratory and production environments.

Compatibility & Integration Designed for use with external test sets enabling reflection measurements. Supports HP Instrument BASIC for test automation and integrates with HP-IB networks for production-line integration and remote monitoring.

4396A Characteristics / Specifications

PARAMETER	VALUE
Model	4396A
Instrument Type	Network, spectrum, and optional impedance analyzer
Series Family	HP 4396 combination analyzer
Network Frequency Range	100 kHz to 1.8 GHz
Spectrum Frequency Range	2 Hz to 1.8 GHz
Impedance Frequency Range Option 0	100 kHz to 1.8 GHz with 43961A RF impedance test kit
Frequency Resolution	1 mHz
Source Power Range	minus 60 dBm to +20 dBm
Source Power Resolution	0.1 dB
Dynamic Magnitude Accuracy	± 0.05 dB
Dynamic Phase Accuracy	± 0.3 deg
Spectrum Overall Level Accuracy	± 1.0 dB from direct A/D conversion without a LOG amplifier
Spectrum Rbw Range	1 Hz to 3 MHz in a 1-3-10 sequence
Noise Sidebands Below 1 Ghz	less than minus 105 dBc/Hz at 10 kHz offset from carriers below 1 GHz
Sensitivity At 10 Mhz	minus 150 dBm/Hz
Sensitivity At 1 Ghz	minus 147 dBm
Display Channels	two independent display channels, overlay or split
Remote Interface	HP-IB
Form Factor	benchtop combination analyzer

4396A Specifications

PARAMETER	VALUE
Agilent 4396A Network Spectrum Impedance Analyzer	Overview
Applications	Amplifier gain, delay, and distortion on one box; filter S-parameters with a test set; optional RF impedance with Option 010 and 43961A.
Stepped FFT spectrum technique for faster narrow RBWs	Optional time-gated spectrum analysis Option 1D6
Optional 50 to 75 ohm spectrum input Option 1D7	IBASIC Option 1C2 for ATE
Technical Specifications	Model: 4396A

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.

technical data lists network mode 100 kHz to 1.8 GHz with 1 mHz resolution and minus 60 to +20 dBm source power, spectrum mode 2 Hz to 1.8 GHz with 1 Hz to 3 MHz RBW, ± 0.05 dB / ± 0.3 deg dynamic NA accuracy, and minus 150 dBm/Hz sensitivity.

Applications

Amplifier gain, delay, and distortion on one box; filter S-parameters withatest set; optional RF impedance with Option 010 and 43961A.

Key Features

Simultaneous network and spectrum split-screen display

Stepped FFT spectrum technique for faster narrow RBWs

Optional time-gated spectrum analysis Option 1D6

Optional 50 to 75 ohm spectrum input Option 1D7

IBASIC Option 1C2 for ATE

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	4396A
Instrument Type	Network, spectrum, and optional impedance analyzer
Series Family	HP 4396 combination analyzer
Network Frequency Range	100 kHz to 1.8 GHz
Spectrum Frequency Range	2 Hz to 1.8 GHz
Impedance Frequency Range Option 010	100 kHz to 1.8 GHz with 43961A RF impedance test kit
Frequency Resolution	1 mHz
Source Power Range	minus 60 dBm to +20 dBm
Source Power Resolution	0.1 dB
Dynamic Magnitude Accuracy	± 0.05 dB
Dynamic Phase Accuracy	± 0.3 deg
Spectrum Overall Level Accuracy	± 1.0 dB from direct A/D conversion withoutaLOG amplifier
Spectrum Rbw Range	1 Hz to 3 MHz in a 1-3-10 sequence
Noise Sidebands Below 1 Ghz	less than minus 105 dBc/Hz at 10 kHz offset from carriers below 1 GHz
Sensitivity At 10 Mhz	minus 150 dBm/Hz
Sensitivity At 1 Ghz	minus 147 dBm
Display Channels	two independent display channels, overlay or split

Option 010 Impedance Kit: 43961A required

Option 1D5: high stability frequency reference

Option 1D6: time gated spectrum analysis
Option 1D7: 50 ohm to 75 ohm spectrum input impedance conversion
Option 1C2: HP IBASIC
Remote Interface: HP-IB
Form Factor: benchtop combination analyzer

Notes

Numeric rows from HP 4396A 100 kHz to 1.8 GHz Network/Spectrum/Impedance Analyzer product technical data (HP literature reproduced in the 4396A technical-data sheet). Do not copy 4396B-only data-sheet rows onto the 4396A.

Ordering Information

OPTION	DESCRIPTION
Option 010	and 43961A.

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 ·
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.