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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N9953B

Agilent / Keysight N9953B FieldFox Handheld Microwave Analyzer The Keysight (Agilent) N9953B isaFieldFox B-Series handheld combination analyzer. OEM FieldFox B-Series data sheets list frequency coverage 300 kHz to 54 GHz with frequency reference accuracy plus or minus 0.9 ppm (spec) plus aging from minus 10 to 55 C. Cable and antenna test, vector network analysis, spectrum analysis, and field microwave maintenance depending on installed options. FieldFox B-Series combination analyzer platform The Keysight (Agilent) N9953B isaFieldFox B-Series handheld combination analyzer. OEM FieldFox B-Series data sheets list frequency coverage 300 kHz to 54 GHz with frequency reference accuracy plus or minus 0.9 ppm (spec) plus aging from minus 10 to 55 C. Cable and antenna test, vector network analysis, spectrum analysis, and field microwave maintenance depending on installed options. FieldFox B-Series combination analyzer platform GPS-disciplined frequency reference option path



MODEL

**Agilent / Keysight
N9953B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N9953B

LISTING

<https://aumictechlabs.com/products/n9953b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight N9953B FieldFox is a handheld microwave analyzer that combines vector network analysis, spectrum analysis, and cable/antenna testing into a single portable instrument. Weighing 3.4 kg, it delivers benchtop-level measurement accuracy in field environments, spanning routine maintenance to complex troubleshooting across microwave communication systems. The platform

uses software-enabled configuration, allowing operators to add measurement functions via licensed options to match specific application requirements.

Technical Specifications

Frequency Coverage Minimum: 300 kHz (CAT/VNA), 9 kHz (Spectrum Analyzer) Maximum: 54 GHz (standard); 110 GHz (with millimeter-wave downconverter option)

Analysis bandwidth: 120 MHz

Real-time bandwidth: 120 MHz gap-free

Maximum IQ streaming bandwidth: 1 MHz

Performance

System dynamic range: 115 dB (simultaneous four S-parameter measurement)

Spectrum analyzer accuracy: ± 0.3 dB (without warm-up)

Phase noise: -113 dBc/Hz @ 1 GHz (10 kHz offset)

Key Features

Vector Network Analyzer (VNA) Simultaneous measurement of all four S-parameters Full 2-port S-parameter capability 1-port mixed-mode S-parameters TDR cable measurements Vector voltmeter functionality (option)

Cable and Antenna Tester (CAT) Standard on base model DTF (dB, linear, VSWR) measurements Return loss and return loss dB analysis 1-port cable loss characterization

Spectrum Analyzer (SA) 9 kHz to 54 GHz frequency range (option) Accurate measurements without warm-up requirement

Additional Capabilities Real-time spectrum analysis Over-the-air (OTA) measurements for 5G NR and LTE Built-in power meter Integrated downconverter support for millimeter-wave extension

Typical Applications Microwave communication system field testing, cable and connector validation, antenna characterization, transmission line diagnostics, 5G NR and LTE network deployment and maintenance.

Compatibility & Integration Software-driven architecture enables selective activation of measurement suites without hardware redesign, reducing cost and complexity in multi-function field deployments.

N9953B Characteristics / Specifications

PARAMETER	VALUE
Model	N9953B
Frequency Range	300 kHz to 54 GHz
Frequency Reference Accuracy Spec	plus or minus 0.9 ppm + aging (minus 10 to 55 C)
Frequency Reference Accuracy Typical	plus or minus 0.5 ppm + aging
Frequency Accuracy Locked To GPS	plus or minus 0.01 ppm
Frequency Accuracy GPS Antenna Disconnected	plus or minus 0.4 ppm nominal
Aging Rate	plus or minus 1 ppm/yr for 20 years (spec) will not exceed plus or minus 3.5 ppm
Frequency Resolution 30 kHz To 1.91211 GHz	0.67 Hz
Frequency Resolution 1.91211 To 3.82461 GHz	1.34 Hz
Frequency Resolution 3.82461 To 7.64961 GHz	2.68 Hz
Frequency Resolution 7.64961 To 15.29961 GHz	5.36 Hz
Frequency Resolution 15.29961 To 26.5 GHz	10.73 Hz
Frequency Resolution 26.5 To 45.8 GHz Class	16.09 Hz (N995xB)
Frequency Resolution 45.8 To 54 GHz Class	32.19 Hz (N995xB)
Data Points Class	101 to 10001 points including 4001 and 10001
IF Bandwidth Class VNA	3 Hz to 100 kHz stepped set
System Impedance	50 ohm nominal
Platform	FieldFox B-Series handheld analyzer
Battery Operation	yes
Operating Temperature Class	minus 10 C to 55 C FieldFox class

PARAMETER	VALUE
Connectivity Class	USB and LAN
Brand Lineage	Agilent / Keysight
Instrument Type	FieldFox combination analyzer CAT VNA SA
Bandwidth	Class VNA: 3 Hz to 100 kHz stepped set
Operating temperature	Class: minus 10 C to 55 C FieldFox class

N9953B Specifications

PARAMETER	VALUE
Key Features	Frequency coverage 300 kHz to 54 GHz
Technical Specifications	Model: N9953B
Notes	From Keysight FieldFox B-Series Handheld Analyzers data sheet model row for N9953B.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: minus 10 C to 55 C FieldFox class
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Operating Temperature Class	minus 10 C to 55 C FieldFox class
Connectivity Class	USB and LAN
Brand Lineage	Agilent / Keysight
Instrument Type	FieldFox combination analyzer CAT VNA SA Notes From Keysight FieldFox B-Series Handheld Analyzers data sheet model row for N9953B.

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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Notes

From Keysight FieldFox B-Series Handheld Analyzers data sheet model row for N9953B.

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.