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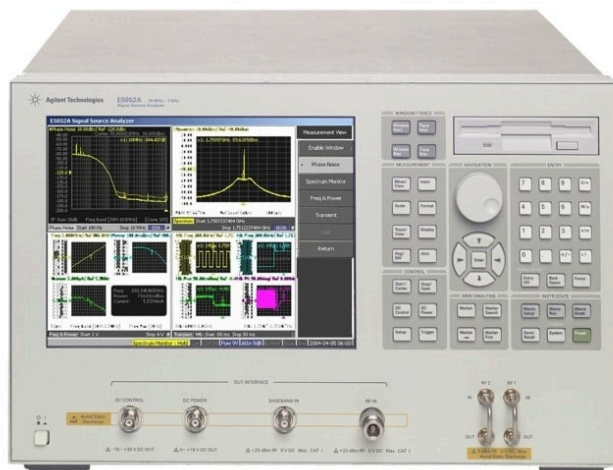
Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight E5052B

Keysight / Agilent E5052B Signal Source Analyzer 10 MHz to 7 GHz The Keysight/Agilent E5052B is a signal source analyzer for SSB phase-noise, spur, residual-FM, and jitter measurements from 10 MHz to 7 GHz at the RF IN port, extendable to 26.5 GHz or 110 GHz with microwave downconverter accessories. OEM data sheet tables specify Type-N RF IN, -20 to +20 dBm measurement level above 30 MHz, 0 to 35 dB input attenuator in 5 dB steps, and phase-noise offset coverage to 100 MHz for carriers above 1 GHz. The Keysight/Agilent E5052B is a signal source analyzer for SSB phase-noise, spur, residual-FM, and jitter measurements from 10 MHz to 7 GHz at the RF IN port, extendable to 26.5 GHz or 110 GHz with microwave downconverter accessories. OEM data sheet tables specify Type-N RF IN, -20 to +20 dBm measurement level above 30 MHz, 0 to 35 dB input attenuator in 5 dB steps, and phase-noise offset coverage to 100 MHz for carriers above 1 GHz. Crystal oscillator and synthesizer phase-noise characterization, VCO tuning analysis, and residual noise / jitter measurements in RF labs.



MODEL

**Agilent / Keysight
E5052B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

E5052B

LISTING

<https://aumictechlabs.com/products/e5052b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight E5052B Signal Source Analyzer is a single-instrument platform for RF and microwave signal source characterization. It combines phase noise measurement, transient

analysis, and frequency tracking into one system, reducing test complexity and measurement time by over 10 times compared to conventional methods. The E5052B addresses demanding metrology requirements in R&D, manufacturing, and service environments through ultra-low noise floors, broad frequency coverage, and rapid acquisition. Engineers use it to qualify local oscillators, synthesizers, clocks, and signal sources with critical performance margins. A large color LCD touchscreen interface streamlines operation and setup.

Technical Specifications

Frequency Coverage RF input: 10 MHz to 7 GHz Analysis offset range: 1 Hz to 100 MHz Transient capture: up to 80 MHz narrowband, up to 4.8 GHz wideband Wideband mode: 250 MHz to 7 GHz Measurement bands: 10–41 MHz, 39–101 MHz, 99 MHz–1.5 GHz, 250 MHz–7 GHz Frequency tracking range: 0.4% of carrier Extension to 26.5 GHz with E5053A Downconverter; to 110 GHz with E5053A and 11970 series mixers

Phase Noise Performance Measurement method: ultra-low noise floor via cross-correlation Random jitter floor: 9 femtoseconds at 10 Gbps SSB phase noise sensitivity (1 GHz carrier, +5 dBm, correlation = 1): – 1 Hz offset: –128 dBc/Hz – 10 Hz: –137 dBc/Hz – 100 Hz: –144 dBc/Hz – 1 kHz: –160 dBc/Hz – 10 kHz: –170 dBc/Hz – 100 kHz: –168 dBc/Hz – 1 MHz: –169 dBc/Hz Residual spurious response: 10 kHz offset with correlation > 120 sec; < –65 dBc typical at 1–10 kHz offset

Reference oscillator bandwidth: Narrow or Wide LO optimization: 150 kHz (far-out)

Key Features Cross-correlation technique enables exceptional phase noise sensitivity by sampling oscilloscopes Simultaneous multi-parameter measurement reduces total test time Dual LO optimization modes address both wideband and close-in noise characterization Large touchscreen display with intuitive navigation

Typical Applications Local oscillator and frequency synthesizer validation Clock jitter and stability analysis Reference oscillator characterization Transient frequency behavior capture

Compatibility & Integration Frequency extension available via E5053A Downconverter Mixer compatibility with Keysight 11970 series for operation to 110 GHz

Features & description

From manufacturer datasheet

Built-in DC control supplies for VCO test

Normal and wide capture phase-noise modes Microwave extender path to 26.5/110 GHz Technical Specifications Model: E5052B Instrument Type: Signal source analyzer Rf In Connector: Type-N female, 50 ohm nominal Rf In Frequency Range: 10 MHz to 7 GHz Rf In Level Above 30 Mhz: -20 dBm to +20 dBm Rf In Level Below 30 Mhz: -15 dBm to +20 dBm Input Attenuator: 0 to 35 dB in 5 dB steps Input Damage Level Ac: greater than +23 dBm Input Damage Level Dc: greater than 5 V Input Vswr 10 Mhz To 30 Mhz: less than 1.6 Input Vswr 30 Mhz To 2 Ghz: less than 1.2 Input Vswr 2 To 3 Ghz: less than 1.3 Input Vswr 4 To 7 Ghz Typical: less than 1.5 Rf Frequency Tracking Range: 0.4% of carrier frequency Offset Range Carrier Above 1 Ghz: 1 Hz to 100 MHz (1 Hz to 40 MHz wide capture) Phase Noise Uncertainty 100 Hz To 1 KHz: +/-3 dB Phase Noise Uncertainty 1 KHz To 40 Mhz: +/-2 dB (+/-3 dB wide capture) If Gain Setting: 0 dB to 50 dB in 10 dB steps Residual Spurious Response Spd: less than -80 dBc at >10 kHz offset with long correlation Measurement Parameters: SSB phase noise, spurs, integrated phase, residual FM, jitter Cross Correlation Range: 1 to 10000 correlations Chassis Form: benchtop signal source analyzer

E5052B Characteristics / Specifications

PARAMETER	VALUE
Model	E5052B
Instrument Type	Signal source analyzer
Rf In Connector	Type-N female, 50 ohm nominal
Rf In Frequency Range	10 MHz to 7 GHz
Rf In Level Above 30 Mhz	-20 dBm to +20 dBm
Rf In Level Below 30 Mhz	-15 dBm to +20 dBm
Input Attenuator	0 to 35 dB in 5 dB steps
Input Damage Level Ac	greater than +23 dBm
Input Damage Level Dc	greater than 5 V
Input Vswr 10 Mhz To 30 Mhz	less than 1.6
Input Vswr 30 Mhz To 2 Ghz	less than 1.2
Input Vswr 2 To 3 Ghz	less than 1.3
Input Vswr 4 To 7 Ghz Typical	less than 1.5
Rf Frequency Tracking Range	0.4% of carrier frequency
Offset Range Carrier Above 1 Ghz	1 Hz to 100 MHz (1 Hz to 40 MHz wide capture)
Phase Noise Uncertainty 100 Hz To 1 Khz	+/-3 dB
Phase Noise Uncertainty 1 Khz To 40 Mhz	+/-2 dB (+/-3 dB wide capture)
If Gain Setting	0 dB to 50 dB in 10 dB steps
Residual Spurious Response Spd	less than -80 dBc at >10 kHz offset with long correlation
Measurement Parameters	SSB phase noise, spurs, integrated phase, residual FM, jitter
Cross Correlation Range	1 to 10000 correlations
Chassis Form	benchtop signal source analyzer

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	E5052B
Instrument Type	Signal source analyzer
Rf In Connector	Type-N female, 50 ohm nominal
Rf In Frequency Range	10 MHz to 7 GHz
Rf In Level Above 30 Mhz	-20 dBm to +20 dBm
Rf In Level Below 30 Mhz	-15 dBm to +20 dBm
Input Attenuator	0 to 35 dB in 5 dB steps
Input Damage Level Ac	greater than +23 dBm
Input Damage Level Dc	greater than 5 V
Input Vswr 10 Mhz To 30 Mhz	less than 1.6
Input Vswr 30 Mhz To 2 Ghz	less than 1.2
Input Vswr 2 To 3 Ghz	less than 1.3
Input Vswr 4 To 7 Ghz Typical	less than 1.5
Rf Frequency Tracking Range	0.4% of carrier frequency
Offset Range Carrier Above 1 Ghz	1 Hz to 100 MHz (1 Hz to 40 MHz wide capture)
Phase Noise Uncertainty 100 Hz To 1 Khz: +/-3 dB	
Phase Noise Uncertainty 1 Khz To 40 Mhz: +/-2 dB (+/-3 dB wide capture)	
Specifications	
PARAMETER	VALUE
If Gain Setting	0 dB to 50 dB in 10 dB steps
Residual Spurious Response Spd	less than -80 dBc at >10 kHz offset with long correlation
Measurement Parameters	SSB phase noise, spurs, integrated phase, residual FM, jitter
Cross Correlation Range	1 to 10000 correlations
Chassis Form	benchtop signal source analyzer

Notes

From Keysight E5052B Signal Source Analyzer data sheet. Microwave coverage requires E5053A/compatible downconverter accessories; option 011 changes some PN mode details.

Ordering Information

OPTION	DESCRIPTION
Option 011	changes some PN mode details.

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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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.