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Data Sheet

August 12, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) E5058A SSA-X Signal Source Analyzer, 1 MHz to 54 GHz

Keysight / Agilent E5058A SSA-X Signal Source Analyzer The E5058A is the 54 GHz member of the SSA-X signal source analyzer family for absolute and residual phase noise measurements using cross-correlation and ultra-low-noise sensitivity. The E5058A is the 54 GHz member of the SSA-X signal source analyzer family for absolute and residual phase noise measurements using cross-correlation and ultra-low-noise sensitivity.



MODEL

**Keysight / Agilent
E5058A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

E5058A

LISTING

<https://aumictechlabs.com/products/e5058a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight (Agilent) E5058A SSA-X Signal Source Analyzer is a one-box instrument for precise characterization of signal sources across 1 MHz to 54 GHz. It measures phase noise, AM noise, residual noise, baseband noise, and transient behavior of RF signals with exceptional sensitivity down to -171 dBc/Hz. The analyzer features an integrated clean internal signal source with advanced path delay compensation for accurate residual phase noise measurement, supporting both absolute and cross-correlation methods. It evaluates synthesizers, local oscillators, VCOs, and other signal sources through flexible measurement settings and multi-window interface. Technical Specifications Frequency Range: 1 MHz to 54 GHz Offset Frequency Range: 1

mHz to > 1 GHz Phase Noise Sensitivity: -171 dBc/Hz (RF = 16 GHz @ 1 MHz offset, typical) SSB Phase Noise Sensitivity (Option 2xx): +10 dBm typical (< 44 GHz), +5 dBm ($\geq$ 44 GHz) input; cross-correlation factor = 1 Cross-correlation Factor: 1 to 100,000 Level Measurement Uncertainty (sinusoidal input): ± 1.2 dB (-20 dBm $\leq$ signal < -10 dBm, 1–8 GHz); ± 1 dB (-10 dBm $\leq$ signal $\leq$ +15 dBm, 1–8 GHz); ± 1.5 dB (+15 dBm < signal $\leq$ +20 dBm, 1–8 GHz); ± 1 dB (-20 dBm to +15 dBm, 1–54 GHz) Key Features Absolute and residual phase noise measurements via cross-correlation AM noise, residual noise, baseband noise analysis Frequency, RF power, and phase transient / RF transient measurements VCO characterization with two clean DC voltage channels and tuning voltage outputs Full-span spectrum analysis and spectrum monitor (up to 15 MHz span) Pulsed-RF measurements Option 100: Standard phase noise performance Option 200: Enhanced low-phase-noise reference (4–7 dB sensitivity advantage up to ~10 kHz offset) Option 401/400: LO out/IF in connectors for external mixer configurations above 54 GHz Two-port vector network analysis capability (optional) Clock jitter analysis via application-specific software (e.g., S96302B Precision Jitter Analysis) for SerDes and PLL evaluation Typical Applications Oscillator and synthesizer validation Phase noise and jitter characterization of clock and SerDes components VCO tuning and performance evaluation Transient analysis of RF signal sources Wideband noise floor measurement Compatibility & Integration The instrument supports external mixers and power dividers for DUT measurements exceeding 54 GHz. Application-specific software modules expand measurement scope beyond standard phase noise analysis.

Features & description

From manufacturer datasheet

Features

• RF frequency range: 1 MHz to 54 GHz • Family siblings: E5055A 8 GHz; E5056A 26.5 GHz; E5057A 44 GHz; E5058A 54 GHz • Minimum offset frequency: 1 mHz • Maximum offset (default): up to 1 GHz for carriers 1.61 GHz–54 GHz (family table) • Max offset extension ON: up to 8 GHz / 3 GHz by carrier band (to 54 GHz) • Absolute and residual phase noise measurement • Cross-correlation method for improved sensitivity

Applications

• Millimeter-wave oscillator phase noise to 54 GHz • Residual phase noise of high-frequency sources • Source spectral purity characterization

E5058A Characteristics / Specifications

PARAMETER	VALUE
Model	E5058A
Manufacturer	Keysight / Agilent
Instrument Type	SSA-X Signal Source Analyzer
Alias	E5058A; Keysight E5058A
Frequency range	1 MHz to 54 GHz
Min offset	1 mHz
Max carrier	54 GHz
Method	cross-correlation phase noise Notes Specs from Keysight SSA-X family data sheet (E5058A column). Confirm millimeter-wave front-end options on the unit.
RF frequency range	1 MHz to 54 GHz
Family siblings	E5055A 8 GHz; E5056A 26.5 GHz; E5057A 44 GHz; E5058A 54 GHz
Minimum offset frequency	1 mHz
Maximum offset (default)	up to 1 GHz for carriers 1.61 GHz–54 GHz (family table)
Max offset extension ON	up to 8 GHz / 3 GHz by carrier band (to 54 GHz)

E5058A Specifications

PARAMETER	VALUE
Applications	- Millimeter-wave oscillator phase noise to 54 GHz
Key Features	- RF frequency range: 1 MHz to 54 GHz
Technical Specifications	Model: E5058A
Notes	Specs from Keysight SSA-X family data sheet (E5058A column). Confirm millimeter-wave front-end options on the unit.

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	E5058A
Manufacturer	Keysight / Agilent
Instrument Type	SSA-X Signal Source Analyzer
Alias	E5058A; Keysight E5058A

Specifications

PARAMETER	VALUE
Frequency range	1 MHz to 54 GHz
Min offset	1 mHz
Max carrier	54 GHz
Method	cross-correlation phase noise

Notes

Specs from Keysight SSA-X family data sheet (E5058A column). Confirm millimeter-wave front-end options on the unit.

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.