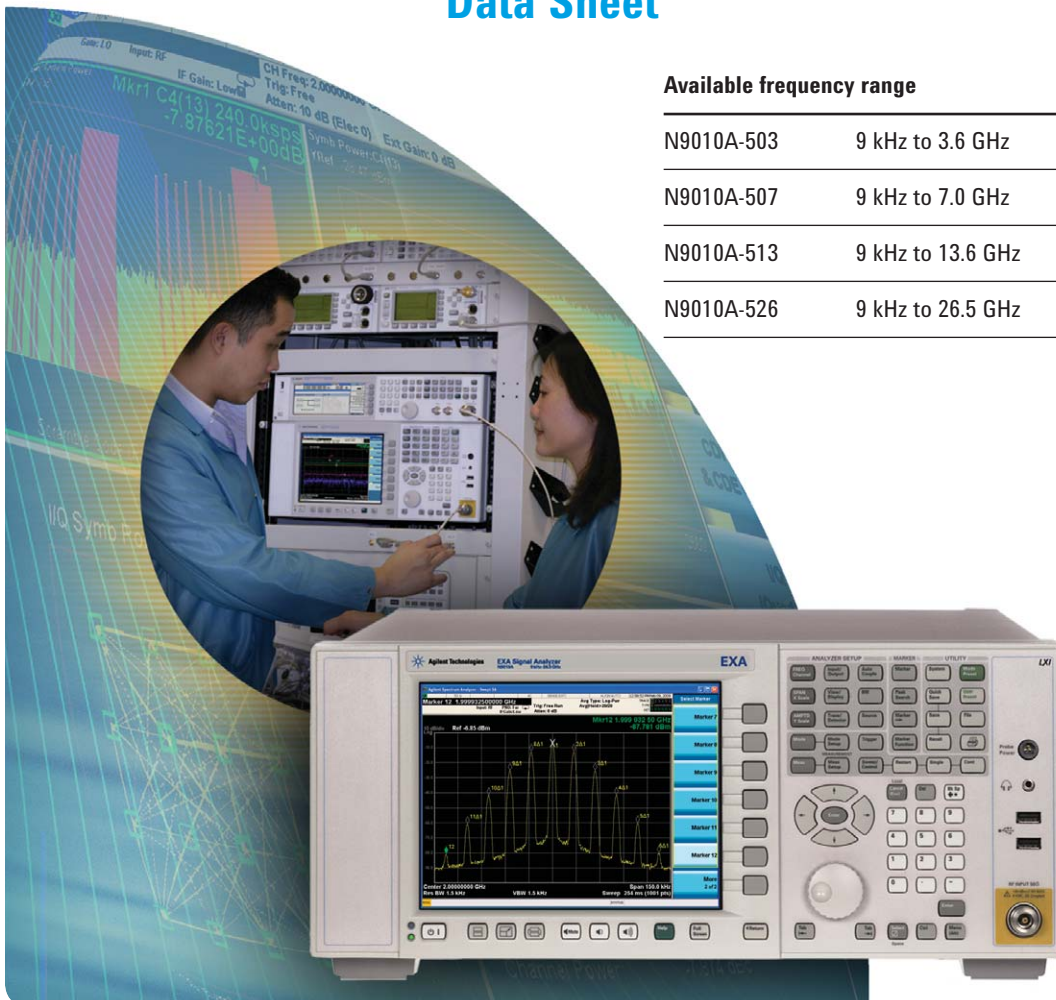


# Agilent EXA Signal Analyzer N9010A

## Data Sheet

### Available frequency range

N9010A-503	9 kHz to 3.6 GHz
N9010A-507	9 kHz to 7.0 GHz
N9010A-513	9 kHz to 13.6 GHz
N9010A-526	9 kHz to 26.5 GHz



LXI class C certified



**Agilent Technologies**

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## Eliminate the compromise between speed and price

The Agilent EXA is the industry's fastest economy-class signal analyzer. Its speed and accuracy, coupled with its unprecedented performance and application coverage, provides development and manufacturing engineers with the capabilities to cost-effectively troubleshoot new designs, increase manufacturing throughput, or analyze complex and time-varying signals.

The EXA seamlessly integrates a broad range of standards-based measurements with Agilent's industry-leading 89600 vector signal analysis (VSA) software—all in a single instrument. In addition to the use of an open Windows® XP Professional operating system, the EXA provides an advanced signal analysis user interface. All measurement features and functions are intuitively grouped and accessible from the front panel or via a USB keyboard and mouse.

Optional measurement application software provides preconfigured test routines for 802.16e Mobile WiMAX™, W-CDMA, HSDPA/HSUPA, GSM/EDGE/EDGE Evolution, and more. See page 19 or visit: [www.agilent.com/find/xseries\\_apps](http://www.agilent.com/find/xseries_apps) for more information. Running the Agilent 89600 VSA software application in the EXA enables advanced signal demodulation analysis and troubleshooting of more than 50 demodulation formats including: 2G, 3G, 3.5G, WiMAX, WLAN, and Private Mobile Radio.

## Definitions and Conditions

Specifications describe the performance of parameters covered by the product warranty and apply over 5 to 50 °C unless otherwise noted. 95th percentile values indicate the breadth of the population ( $\approx 2\sigma$ ) of performance tolerances expected to be met in 95 percent of the cases with a 95 percent confidence, for any ambient temperature in the range of 20 to 30 °C. In addition to the statistical observations of a sample of instruments, these values include the effects of the uncertainties of external calibration references. These values are not warranted. These values are updated occasionally if a significant change in the statistically observed behavior of production instruments is observed. Typical describes additional product performance information that is not covered by the product warranty. It is performance beyond specifications that 80 percent of the units exhibit with a 95 percent confidence level over the temperature range 20 to 30 °C. Typical performance does not include measurement uncertainty. Nominal values indicate expected performance, or describe product performance that is useful in the application of the product, but is not covered by the product warranty.

The analyzer will meet its specifications when:

- The analyzer is within its calibration cycle.
- Under auto couple control, except that Auto Sweep Time Rules = Accy.
- For signal frequencies < 20 MHz, DC coupling applied.
- The analyzer has been stored at an ambient temperature within the allowed operating range for at least two hours before being turned on, if it had previously been stored at a temperature range inside the allowed storage range but outside the allowed operating range.
- The analyzer has been turned on at least 30 minutes with Auto Align set to normal, or if Auto Align is set to off or partial, alignments must have been run recently enough to prevent an Alert message. If the Alert condition is changed from Time and Temperature to one of the disabled duration choices, the analyzer may fail to meet specifications without informing the user.

This EXA signal analyzer data sheet is a summary of the complete specifications and conditions, which are available in the *EXA Signal Analyzer Specification Guide*. The *EXA Signal Analyzer Specification Guide* can be obtained on the web at: [www.agilent.com/find/exa\\_manuals](http://www.agilent.com/find/exa_manuals).

## Frequency and Time Specifications

Frequency range	DC Coupled	AC Coupled
Option 503	9 kHz to 3.6 GHz	10 MHz to 3.6 GHz
Option 507	9 kHz to 7.0 GHz	10 MHz to 7.0 GHz
Option 513	9 kHz to 13.6 GHz	10 MHz to 13.6 GHz
Option 526	9 kHz to 26.5 GHz	10 MHz to 26.5 GHz

Band	LO Multiple (N)	Required options	
0	1	9 kHz to 3.6 GHz	
1	1	3.5 to 7.0 GHz	Option 507
1	1	3.5 to 8.4 GHz	Options 513, 526
2	2	8.4 to 13.6 GHz	Options 513, 526
3	2	13.5 to 17.1 GHz	Option 526
4	4	17 to 26.5 GHz	Option 526

### Frequency reference

Accuracy	$\pm [( \text{time since last adjustment} \times \text{aging rate} ) + \text{temperature stability} + \text{calibration accuracy}]$	
Aging rate	Option PFR $\pm 1 \times 10^{-7}$ / year $\pm 1.5 \times 10^{-7}$ / 2 years	Standard $\pm 1 \times 10^{-6}$ / year
Temperature stability 20 to 30 °C 5 to 50 °C	Option PFR $\pm 1.5 \times 10^{-8}$ $\pm 5 \times 10^{-8}$	Standard $\pm 2 \times 10^{-6}$ $\pm 2 \times 10^{-6}$
Achievable initial calibration accuracy	Option PFR $\pm 4 \times 10^{-8}$	Standard $\pm 1.4 \times 10^{-6}$
Example frequency reference accuracy (with Option PFR) 1 year after last adjustment	$= \pm (1 \times 1 \times 10^{-7} + 5 \times 10^{-8} + 4 \times 10^{-8})$ $= \pm 1.9 \times 10^{-7}$	
Residual FM Option PFR Standard	$\leq (0.25 \text{ Hz} \times N)$ p-p in 20 ms nominal $\leq (10 \text{ Hz} \times N)$ p-p in 20 ms nominal See band table above for N (LO Multiple)	

### Frequency readout accuracy (*start, stop, center, marker*)

$\pm (\text{marker frequency} \times \text{frequency reference accuracy} + 0.25\% \times \text{span} + 5\% \times \text{RBW} + 2 \text{ Hz} + 0.5 \times \text{horizontal resolution}^1)$

1. Horizontal resolution is  $\text{span}/(\text{sweep points} - 1)$

### Marker frequency counter

Accuracy	$\pm (\text{marker frequency} \times \text{frequency reference accuracy} + 0.100 \text{ Hz})$
Delta counter accuracy	$\pm (\text{delta frequency} \times \text{frequency reference accuracy} + 0.141 \text{ Hz})$
Counter resolution	0.001 Hz

## Frequency and Time Specifications (continued)

### Frequency span (FFT and swept mode)

Range	0 Hz (zero span), 10 Hz to maximum frequency of instrument	
Resolution	2 Hz	
Accuracy		
Swept	$\pm(0.25\% \times \text{span} + \text{horizontal resolution})$	
FFT	$\pm(0.10\% \times \text{span} + \text{horizontal resolution})$	

### Sweep time and triggering

Range	Span = 0 Hz	1 $\mu$ s to 6000 s
	Span $\geq$ 10 Hz	1 ms to 4000 s
Accuracy	Span $\geq$ 10 Hz, swept	$\pm 0.01\%$ nominal
	Span $\geq$ 10 Hz, FFT	$\pm 40\%$ nominal
	Span = 0 Hz	$\pm 0.01\%$ nominal
Trigger	Free run, line, video, external 1, external 2, RF burst, periodic timer	
Trigger delay	Span = 0 Hz or FFT	–150 to +500 ms
	Span $\geq$ 10 Hz, swept	1 $\mu$ s to 500 ms
	Resolution	0.1 $\mu$ s

### Time gating

Gate methods:	Gated LO; Gated video; Gated FFT
Gate length range (except method = FFT):	100.0 ns to 5.0 s
Gate delay range:	0 to 100.0 s
Gate delay jitter:	33.3 ns p-p nominal

### Sweep (trace) point range

All spans	1 to 40001
-----------	------------

### Resolution bandwidth (RBW)

Range (–3.01 dB bandwidth)	1 Hz to 3 MHz (10% steps), 4, 5, 6, 8 MHz	
Power bandwidth accuracy	1 Hz to 750 kHz	$\pm 1.0\%$ ( $\pm 0.044$ dB)
RBW range	820 kHz to 1.2 MHz (< 3.6 GHz CF)	$\pm 2.0\%$ ( $\pm 0.088$ dB)
	1.3 to 2.0 MHz (< 3.6 GHz CF)	$\pm 0.07$ dB nominal
	2.2 to 3 MHz (< 3.6 GHz CF)	$\pm 0.15$ dB nominal
	4 to 8 MHz (< 3.6 GHz CF)	$\pm 0.25$ dB nominal
Bandwidth accuracy (–3.01 dB)	1 Hz to 1.3 MHz	$\pm 2\%$ nominal
RBW range		
Selectivity (–60 dB/–3 dB)	4.1:1 nominal	

## Frequency and Time Specifications (continued)

### Analysis bandwidth<sup>1</sup>

Maximum bandwidth	Option B25	25 MHz
	Standard	10 MHz

1. Analysis bandwidth is the instantaneous bandwidth available around a center frequency over which the input signal can be digitized for further analysis or processing in the time, frequency, or modulation domain.

### Video bandwidth (VBW)

Range	1 Hz to 3 MHz (10% steps), 4, 5, 6, 8 MHz and wide open (labeled 50 MHz)
Accuracy	±6% nominal

Measurement speed <sup>2</sup>	Option PC2	Standard
Local measurement and display update rate	4 ms (250/s) nominal	11 ms (90/s) nominal
Remote measurement and LAN transfer rate	5 ms (200/s) nominal	6 ms (167/s) nominal
Marker peak search	1.5 ms nominal	5 ms nominal
Center frequency tune and transfer (RF)	20 ms nominal	22 ms nominal
Center frequency tune and transfer (μW)	47 ms nominal	49 ms nominal
Measurement/mode switching	39 ms nominal	75 ms nominal

2. Sweep points = 101

## Amplitude Accuracy and Range Specifications

### Amplitude range

Measurement range	Displayed average noise level (DANL) to +23 dBm
Input attenuator range (9 kHz to 26.5 GHz)	
Standard	0 to 60 dB in 10 dB steps
Option FSA	0 to 60 dB in 2 dB steps

### Electronic attenuator (Option EA3)

Frequency range	9 kHz to 3.6 GHz
Attenuation range	
Electronic attenuator range	0 to 24 dB, 1 dB steps
Full attenuation range (mechanical + electronic)	0 to 84 dB, 1 dB steps

### Maximum safe input level

Average total power (with and without preamp)	+30 dBm (1 W)
Peak pulse power	< 10 $\mu$ s pulse width, < 1% duty cycle +50 dBm (100 W) and input attenuation $\geq$ 30 dB
DC volts	
DC coupled	$\pm 0.2$ Vdc
AC coupled	$\pm 70$ Vdc

### Display range

Log scale	0.1 to 1 dB/division in 0.1 dB steps 1 to 20 dB/division in 1 dB steps (10 display divisions)
Linear scale	10 divisions
Scale units	dBm, dBmV, dB $\mu$ V, dBmA, dB $\mu$ A, V, W, A

## Amplitude Accuracy and Range Specifications (continued)

### Frequency response (10 dB input attenuation, 20 to 30 °C, preselector centering applied, $\sigma$ = nominal standard deviation)

	Specification	95 <sup>th</sup> Percentile ( $\approx 2\sigma$ )
9 kHz to 10 MHz	$\pm 0.8$ dB	$\pm 0.4$ dB
10 MHz to 3.6 GHz	$\pm 0.6$ dB	$\pm 0.3$ dB
3.5 to 7.0 GHz	$\pm 2.0$ dB	
6.9 to 13.6 GHz	$\pm 2.5$ dB	
13.5 to 22.0 GHz	$\pm 3.0$ dB	
22.0 to 26.5 GHz	$\pm 3.2$ dB	
Preamp on (Option P03) (0 dB attenuation)	100 kHz to 3.6 GHz	$\pm 0.28$ dB

### Input attenuation switching uncertainty

50 MHz (reference frequency) attenuation > 2 dB, preamp off	$\pm 0.20$ dB	$\pm 0.08$ dB typical
9 kHz to 3.6 GHz		$\pm 0.3$ dB nominal
3.5 to 7.0 GHz		$\pm 0.5$ dB nominal
6.9 to 13.6 GHz		$\pm 0.7$ dB nominal
13.5 to 26.5 GHz		$\pm 0.7$ dB nominal

### Total absolute amplitude accuracy (10 dB attenuation, 20 to 30 °C, $1 \text{ Hz} \leq \text{RBW} \leq 1 \text{ MHz}$ , input signal $-10$ to $-50$ dBm, all settings auto-coupled except Auto Swp Time = Accy, any reference level, any scale, $\sigma$ = nominal standard deviation)

At 50 MHz	$\pm 0.40$ dB
At all frequencies	$\pm (0.40 \text{ dB} + \text{frequency response})$
9 kHz to 3.6 GHz	$\pm 0.27$ dB (95th Percentile $\approx 2\sigma$ )
Preamp on (Option P03)	100 kHz to 3.6 GHz $\pm (0.39 \text{ dB} + \text{frequency response})$

### Input voltage standing wave ratio (VSWR) ( $\geq 10$ dB input attenuation)

10 MHz to 3.6 GHz	< 1.2:1 nominal
3.6 to 7.0 GHz	< 1.5:1 nominal
7.0 to 13.6 GHz	< 1.6:1 nominal
13.6 to 26.5 GHz	< 1.9:1 nominal
Preamp on (Option P03) (0 dB attenuation)	10 MHz to 3.6 GHz < 1.7:1 nominal



## Amplitude Accuracy and Range Specifications (continued)

### Resolution bandwidth switching uncertainty (referenced to 30 kHz RBW)

1 Hz to 1.5 MHz RBW	±0.08 dB
1.6 MHz to 3 MHz RBW	±0.10 dB
4, 5, 6, 8 MHz RBW	±1.0 dB

### Reference level

Range	
Log scale	–170 to +23 dBm in 0.01 dB steps
Linear scale	Same as Log (707 pV to 3.16 V)
Accuracy	0 dB

### Display scale switching uncertainty

Switching between linear and log	0 dB
Log scale/div switching	0 dB

### Display scale fidelity

Between –10 dBm and –80 dBm input mixer level	±0.15 dB total
---	----------------

### Trace detectors

Normal, peak, sample, negative peak, log power average, RMS average, and voltage average
--

### Preamplifier

Frequency range	Option P03	100 kHz to 3.6 GHz
Gain	100 kHz to 3.6 GHz	+20 dB nominal
Noise figure	100 kHz to 3.6 GHz	11 dB nominal

## Dynamic Range Specifications

### 1 dB gain compression (two-tone)

		Total power at input mixer
	20 MHz to 26.5 GHz	+9 dBm nominal
Preamp on (Option P03)	10 MHz to 3.6 GHz	–10 dBm nominal

### Displayed average noise level (DANL)

(Input terminated, sample or average detector, averaging type = Log, 0 dB input attenuation, IF Gain = High, 20 to 30 °C)

		Specification	Typical
Preamp off	1 to 10 MHz	–147 dBm	–149 dBm
	10 MHz to 2.1 GHz	–148 dBm	–150 dBm
	2.1 to 3.6 GHz	–147 dBm	–148 dBm
	3.6 to 7.0 GHz	–147 dBm	–149 dBm
	7.0 to 13.6 GHz	–143 dBm	–147 dBm
	13.6 to 17.1 GHz	–137 dBm	–142 dBm
	17.1 to 20.0 GHz	–137 dBm	–142 dBm
	20.0 to 26.5 GHz	–134 dBm	–140 dBm
Preamp on (Option P03)	10 MHz to 2.1 GHz	–161 dBm	–163 dBm
	2.1 to 3.6 GHz	–160 dBm	–162 dBm

### Spurious responses

Residual responses (Input terminated and 0 dB attenuation)	200 kHz to 8.4 GHz (swept)	–100 dBm
	Zero span or FFT or other frequencies	–100 dBm nominal
Image responses	10 MHz to 3.6 GHz	–80 dBc (–103 dBc typical)
	3.6 to 13.6 GHz	–75 dBc (–87 dBc typical)
	13.6 to 17.1 GHz	–71 dBc (–85 dBc typical)
	17.1 to 22 GHz	–68 dBc (–82 dBc typical)
	22 to 26.5 GHz	–66 dBc (–78 dBc typical)
LO related spurious (f > 600 MHz from carrier)	10 MHz to 3.6 GHz	–90 dBc typical
Other spurious		
First RF order		
f ≥ 10 MHz from carrier	–68 dBc	
Higher RF order		
f ≥ 10 MHz from carrier	–80 dBc	

## Dynamic Range Specifications (continued)

### Second harmonic distortion (SHI)

	Mixer level	SHI
10 MHz to 1.8 GHz	-15 dBm	+45 dBm nominal
1.8 to 7.0 GHz	-15 dBm	+65 dBm nominal
7.0 to 11.0 GHz	-15 dBm	+55 dBm nominal
11.0 to 13.25 GHz	-15 dBm	+50 dBm nominal

**Third-order intermodulation distortion (TOI)** (two -30 dBm tones at input mixer with tone separation > 5 times IF prefilter bandwidth, 20 to 30 °C, see Specifications Guide for IF prefilter bandwidths)

	Distortion	TOI	Typical
100 to 400 MHz	-80 dBc	+10 dBm	+14 dBm
400 MHz to 1.7 GHz	-82 dBc	+11 dBm	+15 dBm
1.7 to 3.6 GHz	-86 dBc	+13 dBm	+17 dBm
3.6 to 5.1 GHz	-82 dBc	+11 dBm	+17 dBm
5.1 to 7.0 GHz	-86 dBc	+13 dBm	+17 dBm
7.0 to 13.6 GHz	-82 dBc	+11 dBm	+15 dBm
13.6 to 26.5 GHz	-78 dBc	+ 9 dBm	+14 dBm

Preamp on (Option P03)    30 MHz to 3.6 GHz    0 dBm nominal    (two -45 dBm tones at preamp input)

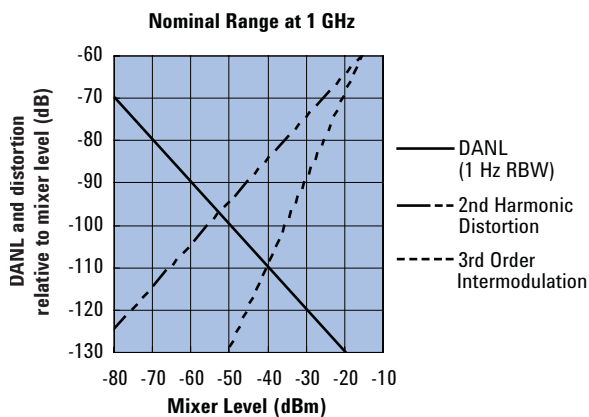


Figure 1. Nominal dynamic range – Band 0, for second and third order distortion, 9 kHz to 3.6 GHz

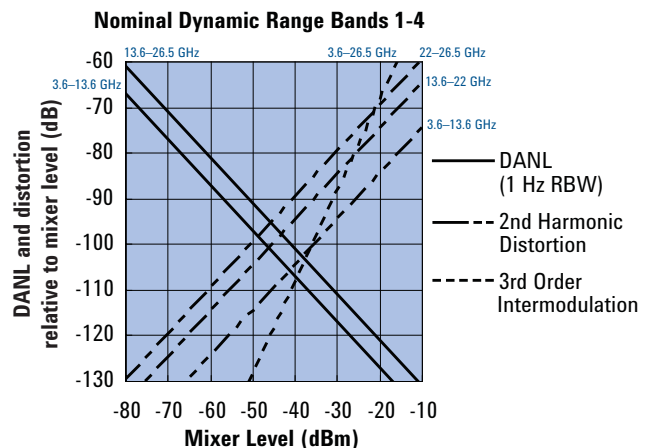


Figure 2. Nominal dynamic range – Bands 1 to 4, second and third order distortion, 3.6 GHz to 26.5 GHz

## Dynamic Range Specifications (continued)

### Phase noise<sup>1</sup>

Noise sidebands (20 to 30 °C, CF = 1 GHz)	Offset	Specification	Typical
	100 Hz	-84 dBc/Hz	-88 dBc/Hz
	1 kHz	--	-98 dBc/Hz nominal
	10 kHz	-99 dBc/Hz	-103 dBc/Hz
	100 kHz	-112 dBc/Hz	-114 dBc/Hz
	1 MHz	-132 dBc/Hz	-135 dBc/Hz
	10 MHz	--	-143 dBc/Hz nominal

1. For nominal values, refer to Figure 3.

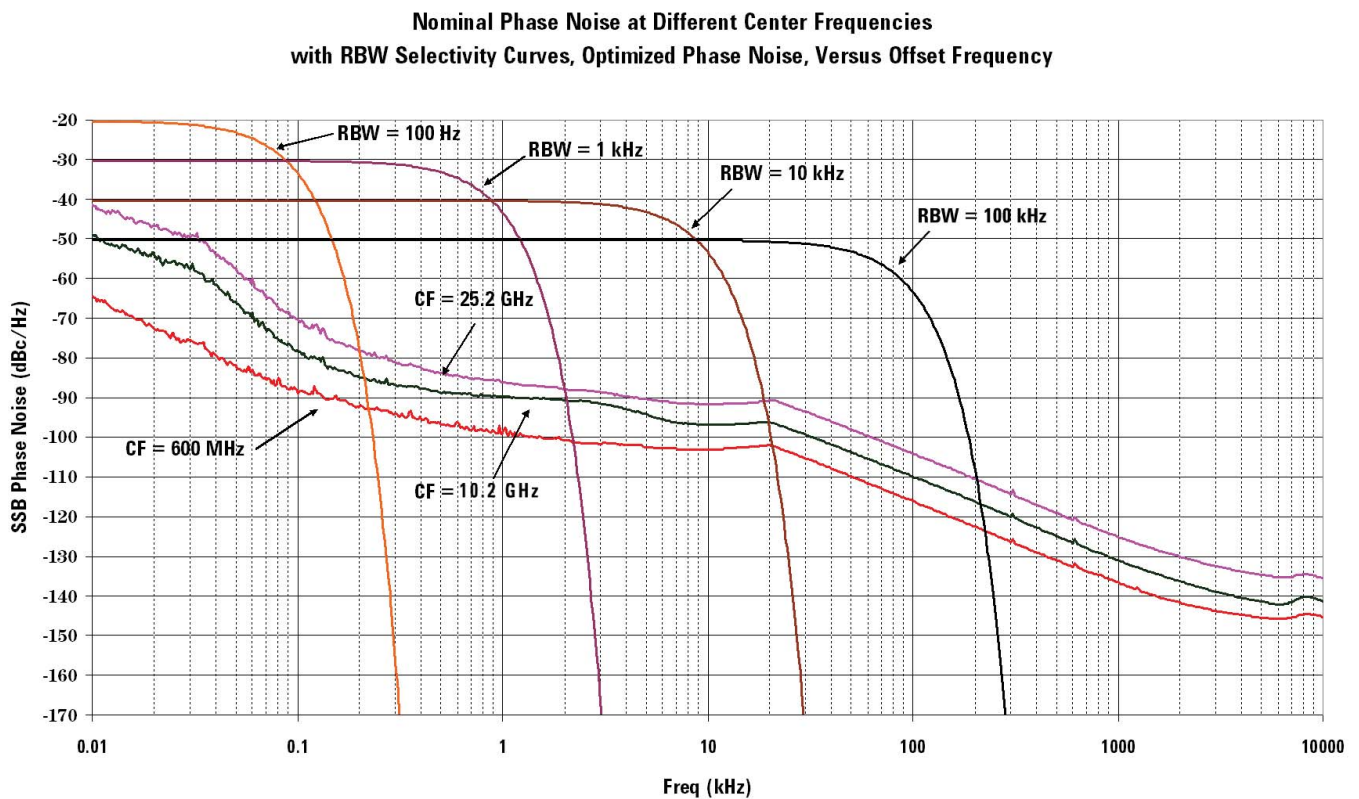


Figure 3. Nominal phase noise at different center frequencies

## Power Suite Measurement Specifications

### Channel power

Amplitude accuracy, W-CDMA or IS95 (20 to 30 °C, attenuation = 10 dB)	±0.94 dB (±0.30 dB 95th percentile)
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### Occupied bandwidth

Frequency accuracy	± [span/1000] nominal
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### Adjacent channel power

Accuracy, W-CDMA (ACLR) (at specific mixer levels and ACLR ranges)	Adjacent	Alternate
MS	±0.22 dB	±0.34 dB
BTS	±1.07 dB	±1.00 dB
Dynamic range (typical)		
Without noise correction	–68 dB	–74 dB
With noise correction	–73 dB	–76 dB
Offset channel pairs measured	1 to 6	
ACP speed (fast method). Data measurement and transfer time	14 ms nominal ( $\sigma = 0.2$ dB)	
Multiple number of carriers measured	Up to 12	

### Power statistics CCDF

Histogram resolution	0.01 dB
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## Power Suite Measurement Specifications (continued)

### Burst power

Methods	Power above threshold, power within burst width
Results	Single burst output power, average output power, maximum power, minimum power within burst, burst width

### Spurious emission

W-CDMA (1 to 3.6 GHz)

Table driven spurious signals; search across regions.

Dynamic range	93.1 dB (98.4 dB typical)
Absolute sensitivity	−79.4 dBm (−85.4 dBm typical)

### Spectrum emission mask (SEM)

cdma2000® (750 kHz offset)

Relative dynamic range (30 kHz RBW)	74.0 dB (81.0 dB typical)
Absolute sensitivity	−94.7 dBm (−100.7 dBm typical)
Relative accuracy	±0.11 dB

3GPP W-CDMA (2.515 MHz offset)

Relative dynamic range (30 kHz RBW)	76.5 dB (83.9 dB typical)
Absolute sensitivity	−94.7 dBm (−100.7 dBm typical)
Relative accuracy	±0.12 dB

## General Specifications

### Temperature range

Operating	5 to 50 °C
Storage	–40 to 65 °C

### EMC

Complies with European EMC Directive 2004/108/EC

- IEC/EN 61326-1 or IEC/EN 61326-2-1
- CISPR Pub 11 Group 1, class A
- AS/NZS CISPR 11:2002
- ICES/NMB-001

This ISM device complies with Canadian ICES-001.

Cet appareil ISM est conforme à la norme NMB-001 du Canada.

### Safety

Complies with European Low Voltage Directive 73/23/EEC, amended by 93/68/EEC

- IEC/EN 61010-1 2nd Edition
- Canada: CSA C22.2 No. 61010-1
- USA: UL 61010-1 2nd Edition

### Audio noise

Acoustic noise emission	Geraeuschemission
LpA < 70 dB	LpA < 70 dB
Operator position	Am Arbeitsplatz
Normal position	Normaler Betrieb
Per ISO 7779	Nach DIN 45635 t.19

### Environmental stress

Samples of this product have been type tested in accordance with the Agilent Environmental Test Manual and verified to be robust against the environmental stresses of storage, transportation and end-use; those stresses include but are not limited to temperature, humidity, shock, vibration, altitude and power line conditions. Test methods are aligned with IEC 60068-2 and levels are similar to MIL-PRF-28800F Class 3.

## General Specifications (continued)

### Power requirements

Voltage and frequency (nominal)	100 to 120 V, 50/60/400 Hz 220 to 240 V, 50/60 Hz
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Power consumption	
On	390 W (fully loaded with options)
Standby	20 W

### Display

Resolution	1024 x 768, XGA
Size	213 mm (8.4 in.) diagonal (nominal)

### Data storage

Internal	160 GB nominal (Removable hard drive) 32 GB nominal (Removable solid state drive) with Option SSD
External	Supports USB 2.0 compatible memory devices

### Weight (without options)

Net	16 kg (35 lbs) nominal
Shipping	28 kg (62 lbs) nominal

### Dimensions

Height	177 mm (7.0 in)
Width	426 mm (16.8 in)
Length	368 mm (14.5 in)

### Warranty

The EXA signal analyzer is supplied with a one-year warranty.

### Calibration cycle

The recommended calibration cycle is two years. Calibration services are available through Agilent service centers.



## Inputs and Outputs

### Front panel

RF input	
Connector	Type-N female, 50 $\Omega$ nominal
Probe power	
Voltage/current	+15 Vdc, $\pm 7\%$ at 150 mA max nominal –12.6 Vdc, $\pm 10\%$ at 150 mA max nominal
USB 2.0 ports	
Master (2 ports)	
Standard	Compatible with USB 2.0
Connector	USB Type-A female
Output current	0.5 A nominal

### Rear panel

10 MHz out	
Connector	BNC female, 50 $\Omega$ nominal
Output amplitude	$\geq 0$ dBm nominal
Frequency	10 MHz $\pm$ (10 MHz x frequency reference accuracy)
Ext Ref In	
Connector	BNC female, 50 $\Omega$ nominal
Input amplitude range	–5 to 10 dBm nominal
Input frequency	10 MHz nominal
Frequency lock range	$\pm 5 \times 10^{-6}$ of specified external reference input frequency
Trigger 1 and Trigger 2 inputs	
Connector	BNC female
Impedance	$> 10$ k $\Omega$ nominal
Trigger level range	–5 to 5 V
Trigger 1 and Trigger 2 outputs	
Connector	BNC female
Impedance	50 $\Omega$ nominal
Level	5 V TTL nominal

## Inputs and Outputs (continued)

### Rear panel (continued)

Sync (reserved for future use)	
Connector	BNC female
Monitor output	
Connector	VGA compatible, 15-pin mini D-SUB
Format	XGA (60 Hz vertical sync rates, non-interlaced) Analog RGB
Resolution	1024 x 768
Noise source drive +28 V (pulsed)	
Connector	BNC female
SNS series noise source	
Digital bus (reserved for future use)	
Connector	MDR-80
Analog Out (reserved for future use)	
Connector	BNC female
USB 2.0 ports	
Master (4 ports)	
Standard	Compatible with USB 2.0
Connector	USB Type-A female
Output current	0.5 A nominal
Slave (1 port)	
Standard	Compatible with USB 2.0
Connector	USB Type-B female
Output current	0.5 A nominal
GPIO interface	
Connector	IEEE-488 bus connector
GPIO codes	SH1, AH1, T6, SR1, RL1, PP0, DC1, C1, C2, C3, C28, DT1, L4, C0
GPIO mode	Controller or Device
LAN TCP/IP interface	
Standard	100Base-T, 1000Base-T with Option PC2
Connector	RJ45 Ethertwist

## EXA Signal Analyzer Ordering Information

For further information, refer to *EXA Signal Analyzer Configuration Guide (5989-6531EN)*

### Hardware

N9010A	EXA signal analyzer
N9010A-503	Frequency range, 9 kHz to 3.6 GHz
N9010A-507	Frequency range, 9 kHz to 7.0 GHz
N9010A-513	Frequency range, 9 kHz to 13.6 GHz
N9010A-526	Frequency range, 9 kHz to 26.5 GHz
N9010A-B25	Analysis bandwidth, 25 MHz
N9010A-FSA	Fine step attenuator
N9010A-PFR	Precision frequency reference
N9010A-EA3	Electronic attenuator, 3.6 GHz
N9010A-P03	Preamplifier, 3.6 GHz
N9010A-PC2	Dual core processor with removable hard drive
N9010A-HDD	Additional removable hard drive
N9010A-SSD	Removable solid state drive substitution

### Optional features

N9010A-EMC	Basic precompliance EMI features
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### Applications

Note: The last two letters of ordering numbers indicate the license type. FP stands for Fixed Perpetual, TP for Transportable Perpetual. It is recommended you configure each application with the same license type. Visit [www.agilent.com/find/xseries\\_transportable](http://www.agilent.com/find/xseries_transportable) for more information about transportable licensing.

N9061A-2FP	Remote language compatibility for 856xE/EC
N9063A-2FP or -2TP	Analog demodulation measurement application
N9068A-2FP or -2TP	Phase noise measurement application
N9069A-1FP or -1TP	Noise figure measurement application (requires preamplifier)
N9051A-2FP	Pulse measurement
N9071A-2FP or -2TP	GSM/EDGE measurement application
N9071A-3FP or -3TP	EDGE Evolution measurement application (requires N9071A-2FP or -3TP)
N9071A-XFP or -XTP	Single acquisition combined GSM/EDGE measurement (requires N9071A-2FP or -2TP)
N9072A-2FP or -2TP	cdma2000® measurement application
N9073A-1FP or -1TP	W-CDMA measurement application
N9073A-2FP or -2TP	HSDPA/HSUPA measurement application (requires N9073A-1FP or -1TP)
N9073A-XFP or -XTP	Single acquisition combined W-CDMA measurement (requires N9073A-1FP or -1TP)
N9075A-2FP or -2TP	802.16 OFDMA measurement application
N9076A-1FP or -1TP	1xEV-DO measurement application
N9079A-1FP or -1TP	TD-SCDMA measurement application
N9079A-2FP or -2TP	HSPA/8PSK measurement application (requires N9079A-1FP or -1TP)
N9080A-1FP or -1TP	LTE measurement application
N9074A-XFP or -XTP	Single acquisition combined Fixed WiMAX measurement application (requires Option B25)
N9077A-XFP or -XTP	Single acquisition combined WLAN measurement application (requires Option B25)
N6149A-2FP or -2TP	iDEN/WiDEN/MotoTalk measurement application
N6153A-2FP or -2TP	DVB-T/H measurement application
N6156A-2FP or -2TP	DTMB measurement application
89601A	89600 Vector Signal Analysis VSA software
89601X	VXA vector signal analyzer measurement application

## EXA Signal Analyzer Ordering Information (continued)

For further information, refer to *EXA Signal Analyzer Configuration Guide (5989-6531EN)*

### Applications (continued)

89601XFP-205 or 89601XTP-205	VXA Basic VSA-Lite (required option at initial order of 89601X)
89601XFP-333 or 89601XTP-333	VXA X-Series connectivity (required option at initial order of 89601X, requires 205)
89601XFP-AYA or 89601XTP-AYA	VXA vector modulation analysis (requires 205/333)
89601XFP-B7R or 89601XTP-B7R	VXA WLAN modulation analysis (requires 205/333)
N6171A-M01	MATLAB® - Basic Signal Analysis Package
N6171A-M02	MATLAB - Standard Signal Analysis Package
N6171A-M03	MATLAB - Advanced Signal Analysis Package

### Accessories

N9010A-KYB	Keyboard <sup>1</sup>
N9010A-KB2	US 65 key USB keyboard
N9010A-BAG	Accessory pouch
N9010A-EFM	USB flash drive, 1 GB
N9010A-DVR	USB DVD-ROM/CD-R/RW drive
N9010A-MLP	Minimum loss pad, 50 to 75 $\Omega$
N9010A-PRC	Portable configuration
N9010AK-CVR	Front panel cover, additional
N9010A-1CP	Rack mount and handle kit
N9010A-1CM	Rack mount kit
N9010A-1CN	Front handle kit
N9010A-1CR	Rack slide kit
N9010A-HTC	Hard transit case

### Warranty and service

Standard warranty is one year.	
R-51B-001-3C	1 year return-to-Agilent warranty extended to 3 years

### Calibration<sup>2</sup>

N9010A-UK6	Commercial calibration certification with test data
N9010A-1A7	ISO 17025 compliant calibration
N9010A-A6J	ANSI Z540 compliant calibration
R-50C-011-3	Inclusive calibration plan, 3 year coverage
R-50C-013-3	Inclusive calibration plan and cal data, 3 year coverage

1. Does not fit Option N9010A-BAG accessory pouch. Order N9010A-KB2 for accessory pouch that fits keyboard.

2. Options not available in all countries

## Literature Resources

Literature title	Literature number
<b>Agilent EXA Signal Analyzers</b>	
<i>Brochure</i>	5989-6527EN
<i>Data Sheet</i>	5989-6529EN
<i>Configuration Guide</i>	5989-6531EN
<b>Agilent MXA Signal Analyzers</b>	
<i>Brochure</i>	5989-5047EN
<i>Data Sheet</i>	5989-4942EN
<i>Configuration Guide</i>	5989-4943EN
<i>Option BBA: Analog Baseband IQ Inputs Technical Overview</i>	5989-6538EN
<b>Agilent X-Series Signal Analyzers (MXA/EXA)</b>	
<i>Demonstration Guide</i>	5989-6126EN
<i>X-Series Signal Analyzer Measurement Application Overview</i>	5989-8019EN
<i>EMI Precompliance Measurements Using MXA/EXA</i>	5990-3690EN
<i>Analog Demodulation Measurement Application Technical Overview</i>	5989-6535EN
<i>Noise Figure Measurement Application Technical Overview</i>	5989-6536EN
<i>Phase Noise Measurement Application Technical Overview</i>	5989-5354EN
<i>Pulse Measurement Software Technical Overview</i>	5990-3801EN
<i>W-CDMA, HSDPA/HSUPA Measurement Application Technical Overview</i>	5989-5352EN
<i>802.16 OFDMA Measurement Application Technical Overview</i>	5989-5353EN
<i>GSM/EDGE Measurement Application Technical Overview</i>	5989-6532EN
<i>EDGE Evolution Measurement Application Flyer</i>	5989-9837EN
<i>cdma2000, 1xEV-DO Measurement Application Technical Overview</i>	5989-6533EN
<i>TD-SCDMA Measurement Application Technical Overview</i>	5989-6534EN
<i>LTE Measurement Application Technical Overview</i>	5989-6537EN
<i>Single Acquisition Combined WLAN Measurement Application Technical Overview</i>	5990-3519EN
<i>Single Acquisition Combined Fixed WiMAX Measurement Application Technical Overview</i>	5990-3520EN
<i>DVB-T/H Measurement Application Technical Overview</i>	5990-3569EN
<i>DTMB Measurement Application Technical Overview</i>	5990-3570EN
<i>Remote Language Compatibility Technical Overview</i>	5989-6539EN
<i>Speed Enhancement and Removable Hard Drive</i>	5989-6541EN
<i>Using Agilent X-Series Analyzers (MXA/EXA) for Measuring and Troubleshooting Digitally Modulated Signals</i>	5989-4944EN
<i>Using Agilent X-Series Analyzers (MXA/EXA) Preselector Tuning for Amplitude Accuracy in Microwave Spectrum Analysis</i>	5989-4946EN
<i>Maximizing Measurement Speed with Agilent X-Series Signal Analyzers (MXA/EXA)</i>	5989-4947EN
<i>Making Precompliance Measurements with Option EMC on X-Series Analyzers (MXA/EXA)</i>	5990-3133EN
<i>8 Hints for Better Spectrum Analysis</i>	5965-7009E
<b>Agilent VXA Vector Signal Analyzer Measurement Applications</b>	
<i>VXA Vector Signal Analyzer Measurement Application, Technical Overview</i>	5989-7463EN
<i>Option AYA Vector Modulation Analysis, Technical Overview</i>	5989-7464EN
<i>Option B7R WLAN Modulation Analysis, Technical Overview</i>	5989-7465EN



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Other European Countries:

[www.agilent.com/find/contactus](http://www.agilent.com/find/contactus)

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