

N9030B PXA X-Series Signal Analyzer, Multi-touch

2 Hz to 3.6, 8.4, 13.6, 26.5, 44, or 50 GHz

Accelerate Signal Insight with Outstanding All-Around Signal Analysis

The PXA is the benchmark for performance that accelerates innovation in demanding applications. With measurement options that range from excellent to exceptional, the PXA puts you in the lead.

Analyze the latest signals with up to 510 MHz analysis bandwidth and better than 78 dBc SFDR, and reveal previously hidden signals with Noise Floor Extension (NFE). To see your device's true behavior, get industry-leading phase noise performance by adding the Keysight-proprietary DDS-based LO.

Simplify migration from legacy Agilent/HP spectrum analyzers with backward code compatibility and compact 4U form-factor.

This data sheet is a summary of the specifications and conditions for PXA signal analyzers. For the complete specifications guide, visit: www.keysight.com/find/pxa_specifications



Table of Contents

- Definitions and Conditions 3
- Frequency and Time Specifications 4
- Amplitude Accuracy and Range Specifications 7
- Dynamic Range Specifications 11
- PowerSuite Measurement Specifications 18
- General Specifications 19
- Inputs and Outputs 20
- I/Q Analyzer 25
- Real-Time Spectrum Analyzer (RTSA) 33

Definitions and Conditions

Specifications describe the performance of parameters covered by the product warranty and apply to temperature ranges 0 to 55 °C, unless otherwise noted.

95th percentile values indicate the breadth of the population (approx. 2s) 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 < 10 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. If Auto Align is set to Light, performance is not warranted, and nominal performance will degrade to become a factor of 1.4 wider for any specification subject to alignment, such as amplitude tolerances.

The term “mixer level” is used as a condition for many specifications in this document. This term is a conceptual quantity that is defined as follows: Mixer Level (dBm) = RF Input Power Level (dBm) - (Electronic + Mechanical) Attenuation (dBm).

Frequency and Time Specifications

Frequency range	DC coupled	AC coupled
Option 503	2 Hz to 3.6 GHz	10 MHz to 3.6 GHz
Option 508	2 Hz to 8.4 GHz	10 MHz to 8.4 GHz
Option 513	2 Hz to 13.6 GHz	10 MHz to 13.6 GHz
Option 526	2 Hz to 26.5 GHz	10 MHz to 26.5 GHz
Option 544	2 Hz to 44 GHz	NA
Option 550	2 Hz to 50 GHz	NA
Band	LO multiple (N)	
0	1	2 Hz to 3.6 GHz
1	1	3.5 to 8.4 GHz
2	2	8.3 to 13.6 GHz
3	2	13.5 to 17.1 GHz
4	4	17 to 26.5 GHz
5	4	26.4 to 34.5 GHz
6	8	34.4 to 50 GHz
Precision frequency reference		
Accuracy	\pm [(time since last adjustment x aging rate) + temperature stability + calibration accuracy]	
Aging rate	$\pm 1 \times 10^{-7}$ / year	
	$\pm 1.5 \times 10^{-7}$ / 2 years	
Temperature stability		
20 to 30 °C	$\pm 1.5 \times 10^{-8}$	
Full temperature range	$\pm 5 \times 10^{-8}$	
Achievable initial calibration accuracy	$\pm 4 \times 10^{-8}$	
	$= \pm (1 \times 1 \times 10^{-7} + 1.5 \times 10^{-8} + 4 \times 10^{-8})$	
Example frequency reference accuracy (with Option PFR)	$= \pm 1.55 \times 10^{-7}$	
1 year after last adjustment	$\pm 1.5 \times 10^{-8}$	
Residual FM	Center frequency = 1 GHz	$\leq (0.25 \text{ Hz} \times N)$ p-p in 20 ms nominal
	10 Hz RBW, 10 Hz VBW	See band table above for N (LO multiple)
Frequency reference (Option EP0)		
Accuracy	\pm [(time since last adjustment x aging rate) + temperature stability + calibration accuracy]	
Aging rate	$\pm 3 \times 10^{-8}$ / year	
Temperature stability	Full temperature range	$\pm 4.5 \times 10^{-9}$
Achievable initial calibration accuracy	$\pm 3.1 \times 10^{-8}$	
Example frequency reference accuracy	$\pm (3 \times 10^{-8} + 4.5 \times 10^{-9} + 3.1 \times 10^{-8})$	
1 year after last adjustment	$= \pm 6.6 \times 10^{-8}$	
Residual FM	Center frequency = 1 GHz	$\leq (0.25 \text{ Hz} \times N)$ p-p in 20 ms nominal
	10 Hz RBW, 10 Hz VBW	See band table above for N (LO multiple)

Frequency readout accuracy (start, stop, center, marker)		
± (marker frequency x frequency reference accuracy + 0.10% x span + 5% x RBW + 2 Hz + 0.5 x horizontal resolution ¹)		
Marker frequency counter		
Accuracy	± (marker frequency x frequency reference accuracy + 0.100 Hz)	
Delta counter accuracy	± (delta frequency x frequency reference accuracy + 0.141 Hz)	
Counter resolution	0.001 Hz	
Frequency span (FFT and swept mode)		
Range	0 Hz (zero span), 10 Hz to maximum frequency of instrument	
Resolution	2 Hz	
Accuracy	Swept	± (0.1% x span + horizontal resolution)
	FFT	± (0.1% x span + horizontal resolution)
Sweep time and triggering		
Range	Span = 0 Hz	1 µs to 6000 s
	Span ≥ 10 Hz	1 ms to 4000 s
Accuracy	Span ≥ 10 Hz, swept	±0.01% nominal
	Span ≥ 10 Hz, FFT	±40% nominal
	Span = 0 Hz	±0.01% nominal
Sweep 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 ≥ 10 Hz, swept	0 to 500 ms
	Resolution	0.1 µs
Time gating		
Gate methods	Gated LO; gated video; gated FFT	
Gate length range (except method = FFT)	1 µs 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 100,001	

1. Horizontal resolution is span/(sweep points -1)

Resolution Bandwidth (RBW)			
Range (-3.01 dB bandwidth)	Standard	1 Hz to 3 MHz (10% steps), 4, 5, 6, 8, and 10 MHz	
	With Option B85 and Option RBE	10, 15, 20, 25, 30, 40, 50, 60, and 70 MHz, in spectrum analyzer mode and zero span	
	With Option B1X and Option RBE	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 100, and 133 MHz, in spectrum analyzer mode and zero span	
	With Option B2X or B5X and Option RBE	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 100, 133, 150, 200, and 212 MHz, in spectrum analyzer mode and zero span	
Bandwidth accuracy (power) RBW range		1 Hz to 100 kHz	±0.5% (± 0.022 dB)
		110 kHz to 1.0 MHz (< 3.6 GHz CF)	±1.0% (± 0.044 dB)
		1.1 to 2 MHz (< 3.6 GHz CF)	±0.07 dB nominal
		2.2 to 3 MHz (< 3.6 GHz CF)	0 to -0.2 dB nominal
		4 to 10 MHz (< 3.6 GHz CF)	0 to -0.4 dB nominal
Bandwidth accuracy (-3.01 dB)	RBW range	1 Hz to 1.3 MHz	±2% nominal
Selectivity (-60 dB/-3 dB)			4.1:1 nominal
EMI bandwidth (CISPR compliant)		200 Hz, 9 kHz, 120 kHz, 1 MHz	(Option EMC required)
EMI bandwidth (MIL STD 461 compliant)		10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz	(Option EMC required)
Analysis bandwidth ¹			
Maximum bandwidth		Option B25 (standard)	25 MHz
		Option B40	40 MHz
		Option B85	85 MHz
		Option B1X	160 MHz
		Option B2X	255 MHz
		Option B5X	510 MHz
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 (in swept mode and zero span)	

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.

Amplitude Accuracy and Range Specifications

Amplitude range

Measurement range		
Preamp Off	Displayed average noise level (DANL) to +30 dBm	
Preamp On		
RF (Opt 503)	Displayed average noise level (DANL) to +30 dBm	
Microwave (Opt 508, 513, 526)	Displayed average noise level (DANL) to +24 dBm	
Millimeter-wave (Opt 544, 550)	Displayed average noise level (DANL) to +20 dBm	
Input mechanical attenuator range (2 Hz to 50 GHz)	0 to 70 dB in 2 dB steps	
Electronic attenuator (Option EA3)		
Frequency range	2 Hz to 3.6 GHz	
Attenuation range		
Electronic attenuator range	0 to 24 dB, 1 dB steps	
Full attenuation range (mechanical + electronic)	0 to 94 dB, 1 dB steps	
Maximum safe input level		
Average total power (with and without preamp)	+30 dBm (1 W)	
Peak pulse power (< 10 μ s pulse width, < 1% duty cycle, input attenuation \geq 30 dB)	+50 dBm (100 W)	
DC volts	DC coupled	± 0.2 Vdc
	AC coupled	± 100 Vdc (for frequency Option 503, 508, 513, or 526)
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 μ V, dBmA, dB μ A, V, W, A	

Frequency response	Specification	95th percentile ($\approx 2\sigma$)	
(10 dB input attenuation, 20 to 30 °C, preselector centering applied above 3.6 GHz)			
RF/MW (Option 503, 508, 513, 526 ¹)	3 Hz to 10 MHz	± 0.46 dB	
	10 to 20 MHz	± 0.35 dB	
	20 MHz to 3.6 GHz	± 0.35 dB	± 0.16 dB
	3.5 to 8.4 GHz	± 1.5 dB	± 0.39 dB
	8.3 to 13.6 GHz	± 2.0 dB	± 0.56 dB
	13.5 to 22.0 GHz	± 2.0 dB	± 0.81 dB
	22.0 to 26.5 GHz	± 2.5 dB	± 0.82 dB
Millimeter-Wave (Option 544, 550)	3 Hz to 20 MHz	± 0.46 dB	
	20 to 50 MHz	± 0.35 dB	± 0.19 dB
	50 MHz to 3.6 GHz	± 0.35 dB	± 0.15 dB
	3.5 to 5.2 GHz	± 1.7 dB	± 0.70 dB
	5.2 to 8.4 GHz	± 1.5 dB	± 0.57 dB
	8.3 to 13.6 GHz	± 2.0 dB	± 0.54 dB
	13.5 to 17.1 GHz	± 2.0 dB	± 0.64 dB
	17.0 to 22.0 GHz	± 2.0 dB	± 0.72 dB
	22.0 to 26.5 GHz	± 2.5 dB	± 0.71 dB
	26.4 to 34.5 GHz	± 2.5 dB	± 1.00 dB
34.4 to 50 GHz	± 3.2 dB	± 1.37 dB	
Preamp on (0 dB attenuation) (Option P03, P08, P13, P26, P44, P50)			
RF/MW (Option 503, 508, 513, 526 ¹)	9 to 100 kHz		± 0.38 dB
	100 kHz to 50 MHz	± 0.68 dB	± 0.34 dB
	50 MHz to 3.6 GHz	± 0.55 dB	± 0.30 dB
	3.5 to 8.4 GHz	± 2.0 dB	± 0.69 dB
	8.3 to 13.6 GHz	± 2.3 dB	± 0.71 dB
	13.5 to 17.1 GHz	± 2.5 dB	± 0.95 dB
	17.0 to 22.0 GHz	± 3.0 dB	± 1.41 dB
	22.0 to 26.5 GHz	± 3.5 dB	± 1.61 dB
Millimeter-wave (Option 544, 550)	9 to 100 kHz		± 0.40 dB
	100 kHz to 50 MHz	± 0.68 dB	± 0.34 dB
	50 MHz to 3.6 GHz	± 0.60 dB	± 0.31 dB
	3.5 to 5.2 GHz	± 2.0 dB	± 0.81 dB
	5.2 to 8.4 GHz	± 2.0 dB	± 0.70 dB
	8.3 to 13.6 GHz	± 2.3 dB	± 0.79 dB
	13.5 to 17.1 GHz	± 2.5 dB	± 0.88 dB
	17.0 to 22.0 GHz	± 3.0 dB	± 1.07 dB
	22.0 to 26.5 GHz	± 3.5 dB	± 1.03 dB
26.4 to 34.5 GHz	± 3.0 dB	± 1.35 dB	

1. Signal frequencies above 18 GHz are prone to response errors due to modes in the Type-N connector used. With the use of Type-N to APC 3.5 mm adapter part number 1250-1744, there are nominally six such modes. The effect of these modes with this connector is included within these specifications.

Input attenuation switching uncertainty		Specifications	Additional information
Relative to 10 dB and preamp off			
At 50 MHz (reference frequency)	Attenuation 12 to 40 dB	±0.14 dB	±0.04 dB typical
	Attenuation 2 to 8 dB	±0.18 dB	±0.06 dB typical
	Attenuation 0 dB		±0.05 dB nominal
Attenuation > 2 dB			
3 Hz to 3.6 GHz			±0.3 dB nominal
3.5 to 8.4 GHz			±0.5 dB nominal
8.3 to 13.6 GHz			±0.7 dB nominal
13.5 to 26.5 GHz			±0.7 dB nominal
26.4 to 50 GHz			±1.0 dB nominal
Total absolute amplitude accuracy			
(10 dB attenuation, 20 to 30 °C, 1 Hz ≤ RBW ≤ 1 MHz, input signal –10 to –50 dBm, all settings auto-coupled except Auto Swp Time = Accy, any reference level, any scale, s = nominal standard deviation)			
	At 50 MHz	±0.24 dB	
	At all frequencies	± (0.24 dB + frequency response)	
	10 Hz to 3.6 GHz	±0.19 dB (95th Percentile approx. 2s)	
Preamp on (Option P03, P08, P13, P26, P44 and P50)	At all frequencies	± (0.36 dB + frequency response)	
Input Voltage Standing Wave Ratio (VSWR)			
		Freq Opt 503, 508, 513, 526	Freq Opt 544, 550
(10 dB input attenuation)	50 MHz	1.09 nominal	1.025 nominal
	10 MHz to 3.6 GHz	1.139 (95th percentile)	1.134 (95th percentile)
	3.5 to 8.4 GHz	1.290 (95th percentile)	1.152 (95th percentile)
	8.3 to 13.6 GHz	1.388 (95th percentile)	1.178 (95th percentile)
	13.5 to 17.1 GHz	1.41 (95th percentile)	1.212 (95th percentile)
	17.0 to 26.5 GHz	1.48 (95th percentile)	1.331 (95th percentile)
	26.4 to 34.5 GHz	NA	1.373 (95th percentile)
	34.4 to 50 GHz	NA	1.389 (95th percentile)
Preamp on (0 dB input attenuation) (Option P03, P08, P13, P26, P44, and P50)	10 MHz to 3.6 GHz	1.71 (95th percentile)	1.393 (95th percentile)
	3.5 to 8.4 GHz	1.54 (95th percentile)	1.50 (95th percentile)
	8.3 to 13.6 GHz	1.57 (95th percentile)	1.310 (95th percentile)
	13.5 to 17.1 GHz	1.48 (95th percentile)	1.330 (95th percentile)
	17.0 to 26.5 GHz	1.54 (95th percentile)	1.339 (95th percentile)
	26.4 to 34.5 GHz	NA	1.41 (95th percentile)
	34.4 to 50 GHz	NA	1.42 (95th percentile)
Preamp on (0 dB input attenuation) (Option P03, P08, P13, P26, P44, and P50)	10 MHz to 3.6 GHz	1.71 (95th percentile)	1.393 (95th percentile)
	3.5 to 8.4 GHz	1.54 (95th percentile)	1.50 (95th percentile)
	8.3 to 13.6 GHz	1.57 (95th percentile)	1.310 (95th percentile)
	13.5 to 17.1 GHz	1.48 (95th percentile)	1.330 (95th percentile)
	17.0 to 26.5 GHz	1.54 (95th percentile)	1.339 (95th percentile)
	26.4 to 34.5 GHz	NA	1.41 (95th percentile)
	34.4 to 50 GHz	NA	1.42 (95th percentile)

Resolution bandwidth switching uncertainty (referenced to 30 kHz RBW)		
1 Hz to 1.5 MHz RBW		±0.03 dB
1.6 MHz to 2.7 MHz RBW		±0.05 dB
3 MHz RBW		±0.10 dB
4, 5, 6, 8, 10 MHz RBW		±0.30 dB
Reference level		
Range	Log scale	-170 to +30 dBm in 0.01 dB steps
	Linear scale	707 pV to 7.07 V with 0.11% (0.01 dB) resolution
Accuracy		0 dB ¹
Display scale switching uncertainty		
Switching between linear and log		0 dB ¹
Log scale/div switching		0 dB ¹
Display scale fidelity		
Between -10 dBm and -18 dBm input mixer level	±0.10 dB total	±0.04 dB typical
Below -18 dBm input mixer level	±0.07 dB	±0.02 dB typical
Trace detectors		
Standard	Normal, peak, sample, negative peak, log power average, RMS average, and voltage average	
With Option EMC	Add quasi-peak to above	
Preamplifier		
Frequency range ²	Option P03	9 kHz to 3.6 GHz
	Option P08	9 kHz to 8.4 GHz
	Option P13	9 kHz to 13.6 GHz
	Option P26	9 kHz to 26.5 GHz
	Option P44	9 kHz to 44 GHz
	Option P50	9 kHz to 50 GHz
Gain	100 kHz to 3.6 GHz	+20 dB nominal
	3.6 to 26.5 GHz	+35 dB nominal
	26.5 to 50 GHz	+40 dB nominal

1. Only affects the display, not the measurement, so it causes no additional error in measurement results from trace data or markers.
2. Below 100 kHz, only 95th percentile (approx. 2s) value for frequency response is provided.

Dynamic Range Specifications

1 dB gain compression (two-tone)		Maximum power at input mixer	
(At 1 kHz RBW with 100 kHz tone spacing, 20 to 30 °C)			
Preamp on (Option P03, P08, P13, P26, P44, and P50)	20 to 40 MHz	-3 dBm	0 dBm typical
	40 to 200 MHz	+1 dBm	+3 dBm typical
	200 MHz to 3.6 GHz	+3 dBm	+5 dBm typical
	3.6 to 16 GHz	+1 dBm	+4 dBm typical
	16 to 26.5 GHz	-1 dBm	+2 dBm typical
	26.5 to 50 GHz		0 dBm nominal
	10 MHz to 3.6 GHz		-14 dBm nominal
	3.6 to 26.5 GHz		
	Tone spacing 100 kHz to 20 MHz		-28 dBm nominal
	Tone spacing > 70 MHz		
	Freq Option ≤ 526		-10 dBm nominal
Freq Option > 526		-20 dBm nominal	
26.5 to 50 GHz		-30 dBm nominal	
Displayed Average Noise Level (DANL) ¹	Specification	Typical	
(Input terminated, sample or average detector, averaging type = Log, 0 dB input attenuation, IF Gain = High, 1 Hz RBW, 20 to 30 °C)			
RF/MW (Option 503, 508, 513, 526)	Normal 1/LNP enabled ²	Normal 1/LNP enabled ²	
Preamp off	3 Hz to 9 kHz		-100 dBm/NA nominal
	9 to 100 kHz	-146 dBm/NA	-151 dBm/NA typical
	100 kHz to 1 MHz	-150 dBm/NA	-156 dBm/NA typical
	1 to 10 MHz	-155 dBm/NA	-158 dBm/NA typical
	10 MHz to 1.2 GHz	-154 dBm/NA	-155 dBm/NA typical
	1.2 to 2.1 GHz	-153 dBm/NA	-155 dBm/NA typical
	2.1 to 3.0 GHz	-151 dBm/NA	-153 dBm/NA typical
	3.0 to 3.6 GHz	-151 dBm/NA	-153 dBm/NA typical
	3.5 to 4.2 GHz	-147 dBm/-153 dBm	-150 dBm/-155 dBm typical
	4.2 to 8.4 GHz	-150 dBm/-155 dBm	-152 dBm/-156 dBm typical
	8.3 to 13.6 GHz	-149 dBm/-155 dBm	-151 dBm/-156 dBm typical
	13.5 to 16.9 GHz	-145 dBm/-152 dBm	-147 dBm/-154 dBm typical
	16.9 to 20.0 GHz	-143 dBm/-151 dBm	-145 dBm/-153 dBm typical
	20.0 to 26.5 GHz	-137 dBm/-150 dBm	-140 dBm/-152 dBm typical
Preamp on ³	100 to 200 kHz	-152 dBm/NA	-159 dBm/NA typical
	200 to 500 kHz	-155 dBm/NA	-161 dBm/NA typical
	0.5 to 1 MHz	-157 dBm/NA	-164 dBm/NA typical
	1 to 10 MHz	-161 dBm/NA	-165 dBm/NA typical
	10 MHz to 2.1 GHz	-165 dBm/NA	-166 dBm/NA typical
	2.1 to 3.6 GHz	-163 dBm/NA	-164 dBm/NA typical
	3.5 to 8.4 GHz	-164 dBm/NA	-166 dBm/NA typical
	8.3 to 13.6 GHz	-163 dBm/NA	-164 dBm/NA typical
	13.5 to 16.9 GHz	-161 dBm/NA	-162 dBm/NA typical
	16.9 to 20.0 GHz	-159 dBm/NA	-161 dBm/NA typical
20.0 to 26.5 GHz	-155 dBm/NA	-157 dBm/NA typical	

1. With standard LO. Instruments with DDS LO (Option EP0) may see a few dB degradation in DANL. See specifications guide for details.

2. LNP (Low Noise Path) requires option LNP.

3. At higher frequency bands (beyond 3.6 GHz), Preamp "On" supersedes "LNP enabled". LNP cannot operate simultaneously with preamp.

DANL with noise floor extension (Option NF2)

DANL improvement exceeds 9 dB with 95% confidence in the average of all bands, paths (normal, preamp, low noise path and microwave preselector bypass), frequency options and signal path options (LNP and MPB).

DANL with noise floor extension

Frequency		Preamp On
Band 0, f > 20 MHz		-174 dBm
Band 1		-174 dBm
Band 2		-173 dBm
Band 3		-172 dBm
Band 4		-166 dBm
Displayed average noise level (DANL) ¹	Specification	Typical
Millimeter-Wave (Option 544, 550)	Normal ² /LNP enabled ³	Normal ² /LNP enabled ³
Preamp off	3 Hz to 9 kHz	-100 dBm/NA nominal
	9 to 100 kHz	-146 dBm/NA
	100 kHz to 1 MHz	-150 dBm/NA
	1 to 10 MHz	-155 dBm/NA
	10 MHz to 1.2 GHz	-154 dBm/NA
	1.2 to 2.1 GHz	-153 dBm/NA
	2.1 to 3 GHz	-151 dBm/NA
	3 to 3.6 GHz	-151 dBm/NA
	3.5 to 4.2 GHz	-143 dBm/-150 dBm
	4.2 to 6.6 GHz	-144 dBm/-152 dBm
	6.6 to 8.4 GHz	-147 dBm/-154 dBm
	8.3 to 13.6 GHz	-147 dBm/-153 dBm
	13.5 to 14 GHz	-143 dBm/-150 dBm
	14 to 17 GHz	-145 dBm/-151 dBm
	17 to 22.5 GHz	-141 dBm/-149 dBm
	22.5 to 26.5 GHz	-139 dBm/-146 dBm
	26.4 to 30 GHz	-138 dBm/-146 dBm
	30 to 34 GHz	-138 dBm/-146 dBm
	33.9 to 37 GHz	-134 dBm/-141 dBm
	37 to 40 GHz	-132 dBm/-140 dBm
40 to 46 GHz	-130 dBm/-140 dBm	
46 to 49 GHz	-130 dBm/-138 dBm	
49 to 50 GHz	-128 dBm/-138 dBm	

1. With standard LO. Instruments with DDS LO (Option EP0) may see a few dB degradation in DANL. See specifications guide for details.

2. With Option NF2 (Noise Floor Extension) "Off".

3. LNP (Low Noise Path) requires option LNP.

Displayed average noise level (DANL) ¹		Specification	Typical	
Millimeter-Wave (Option 544, 550)		Normal ²/LNP enabled ³	Normal ²/LNP enabled ³	
		100 to 200 kHz	-152 dBm	-159 dBm typical
		200 to 500 kHz	-155 dBm	-161 dBm typical
		500 kHz to 1 MHz	-157 dBm	-164 dBm typical
		1 to 10 MHz	-161 dBm	-165 dBm typical
		10 MHz to 2.1 GHz	-164 dBm	-166 dBm typical
		2.1 to 3.6 GHz	-163 dBm	-164 dBm typical
		3.5 to 8.4 GHz	-161 dBm	-163 dBm typical
		8.3 to 13.6 GHz	-161 dBm	-163 dBm typical
		13.5 to 17.1 GHz	-161 dBm	-163 dBm typical
		17 to 20 GHz	-160 dBm	-163 dBm typical
		20 to 26.5 GHz	-158 dBm	-161 dBm typical
		26.4 to 30 GHz	-157 dBm	-159 dBm typical
		30 to 34 GHz	-155 dBm	-158 dBm typical
		33.9 to 37 GHz	-153 dBm	-157 dBm typical
		37 to 40 GHz	-152 dBm	-156 dBm typical
		40 to 46 GHz	-149 dBm	-154 dBm typical
	46 to 50 GHz	-146 dBm	-150 dBm typical	
DANL with noise floor extension (Option NF2) on		95th percentile		
DANL improvement exceeds 9 dB with 95% confidence in the average of all bands, paths (normal, preamp, low noise path and microwave preselector bypass), frequency options and signal path options (LNP and MPB).				
DANL with noise floor extension	Preamp Off	Preamp On	LNP enabled ^{3, 4}	
Band 0, f > 20 MHz	-163 dBm	-174 dBm	N/A	
Band 1	-159 dBm	-172 dBm	-164 dBm	
Band 2	-159 dBm	-172 dBm	-164 dBm	
Band 3	-159 dBm	-173 dBm	-164 dBm	
Band 4	-154 dBm	-169 dBm	-161 dBm	
Band 5	-153 dBm	-167 dBm	-161 dBm	
Band 6	-144 dBm	-158 dBm	-152 dBm	
Residuals, images, and spurious responses				
Residual responses (Input terminated and 0 dB attenuation)	200 kHz to 8.4 GHz	-100 dBm		
	Zero span or FFT or other frequencies	-100 dBm nominal		

1. With standard LO. Instruments with DDS LO (Option EP0) may see a few dB degradation in DANL. See specifications guide for details.
2. With Option NF2 (Noise Floor Extension) "Off".
3. LNP (Low Noise Path) requires option LNP.
4. At higher frequency bands (beyond 3.6 GHz), Preamp "On" supersedes "LNP enabled". LNP cannot operate simultaneously with preamp.

Image responses ⁴	Tuned freq (f)	Excitation Freq	Response RF/MW (Opt 503, 508, 513, 526)	mmW (Opt 544, 550)
Mixer level at -10 dBm	10 MHz to 26.5 GHz	f+45 MHz	-80 dBc/-118 dBc typical	-80 dBc/-118 dBc typical
	10 MHz to 3.6 GHz	f+10,245 MHz	-80 dBc/-112 dBc typical	-80 dBc/-112 dBc typical
	10 MHz to 3.6 GHz	f+645 MHz	-80 dBc/-101 dBc typical	-80 dBc/-101 dBc typical
	3.5 to 13.6 GHz	f+645 MHz	-78 dBc/-87 dBc typical	-80 dBc/-102 dBc typical
	13.5 to 17.1 GHz	f+645 MHz	-74 dBc/-84 dBc typical	-80 dBc/-102 dBc typical
	17.0 to 22 GHz	f+645 MHz	-70 dBc/-82 dBc typical	-80 dBc/-100 dBc typical
	22 to 26.5 GHz	f+645 MHz	-68 dBc/-79 dBc typical	-70 dBc/-97 dBc typical
Mixer level at -30 dBm	26.5 to 34.5 GHz	f+645 MHz		-70 dBc/-94 dBc typical
	34.4 to 42 GHz	f+645 MHz		-59 dBc/-79 dBc typical
	42 to 50 GHz	f+645 MHz		-75 dBc nominal
	26.5 to 50 GHz	f+45 MHz		-90 dBc nominal
Other spurious responses				
	Mixer level	Response		
Carrier frequency \leq 26.5 GHz				
First RF order (f \geq 10 MHz from carrier)	-10 dBm	-80 dBc + 20log(N ¹) Including IF feedthrough, LO harmonic mixing responses		
Higher RF order (f \geq 10 MHz from carrier)	-40 dBm	-80 dBc + 20log(N ¹) Including higher order mixer responses		
Carrier frequency > 26.5 GHz				
First RF order (f \geq 10 MHz from carrier)	-30 dBm	-90 dBc nominal		
Higher RF order (f \geq 10 MHz from carrier)	-30 dBm	-90 dBc nominal		
LO-related spurious responses (200 Hz \leq f < 10 MHz from carrier)	-10 dBm	-68 dBc ² + 20log(N ¹)		
Line-related spurious responses		-73 dBc ² + 20log(N ¹) (nominal)		
Second harmonic distortion (SHI)				
	Source frequency	Mixer level	Distortion³ (LNP Off/LNP On)	SHI³ (LNP Off/LNP On)
RF/MW (Option 503, 508, 513, 526)	10 to 100 MHz	-15 dBm	-57 dBc/NA	+42 dBm/NA
	0.1 to 1.8 GHz	-15 dBm	-60 dBc/NA	+45 dBm/NA
	1.75 to 2.5 GHz	-15 dBm	-77 dBc/-95 dBc	+62 dBm/+80 dBm
	2.5 to 4 GHz	-15 dBm	-77 dBc/-101 dBc	+62 dBm/+86 dBm
	4 to 6.5 GHz	-15 dBm	-77 dBc/-105 dBc	+62 dBm/+90 dBm
	6.5 to 10 GHz	-15 dBm	-70 dBc/-105 dBc	+55 dBm/+90 dBm
	10 to 13.25 GHz	-15 dBm	-62 dBc/-105 dBc	+47 dBm/+90 dBm
Millimeter-wave (Option 544, 550)	10 to 100 MHz	-15 dBm	-57 dBc/NA	+42 dBm/NA
	100 M to 1.8 GHz	-15 dBm	-60 dBc/NA	+45 dBm/NA
	1.8 to 2.5 GHz	-15 dBm	-72 dBc/-95 dBc	+57 dBm/+80 dBm
	2.5 to 3 GHz	-15 dBm	-72 dBc/-99 dBc	+57 dBm/+84 dBm
	3 to 5 GHz	-15 dBm	-77 dBc/-99 dBc	+62 dBm/+84 dBm
	5 to 6.5 GHz	-15 dBm	-77 dBc/-105 dBc	+62 dBm/+90 dBm
	6.5 to 10 GHz	-15 dBm	-70 dBc/-105 dBc	+55 dBm/+90 dBm
	10 to 13.25 GHz	-15 dBm	-62 dBc/-105 dBc	+47 dBm/+90 dBm
	13.25 to 25 GHz	-15 dBm	-65 dBc/-105 dBc (nom.)	+50 dBm/+90 dBm (nom.)
		Preamp level	Distortion	SHI
Preamp on (Option P03, P08, P13, P26, P44, P50)	10 MHz to 1.8 GHz	-45 dBm	-78 dBc nominal	+33 dBm nominal
	1.8 to 13.25 GHz	-50 dBm	-60 dBc nominal	+10 dBm nominal
	13.25 to 25 GHz	-50 dBm	-50 dBm nominal	0 dBm nominal

1. N is the LO multiplication factor. Refer to page 4 for the N value versus frequency ranges.

2. Nominally -40 dBc under large magnetic (0.38 Gauss rms) or vibrational (0.21 g rms) environmental stimuli.

3. Normal path/LNP enabled (requires Option LNP)

4. With standard LO. Instruments with DDS LO (option EP0) may see a few dB degradation in DANL. See specifications guide for details.

Third-Order Intermodulation distortion (TOI)

Two -16 dBm tones (10 MHz to 26.5 GHz) or two -20 dBm tones (26.5 GHz to 50 GHz) at input mixer with tone separation > 5 times IF prefilter bandwidth, 20 to 30 °C

For all frequency options (Option 503, 508, 513, 526, 544, and 550)	10 to 150 MHz	+13 dBm	+16 dBm typical
	150 to 600 MHz	+17 dBm	+20 dBm typical
	0.6 to 1.1 GHz	+19 dBm	+21 dBm typical
	1.1 to 3.6 GHz	+19.5 dBm	+22 dBm typical
For RF/MW only (Option 503, 508, 513, and 526)	3.5 to 8.4 GHz	+17 dBm	+23 dBm typical
	8.3 to 13.6 GHz	+17 dBm	+23 dBm typical
	13.5 to 17.1 GHz	+15 dBm	+20 dBm typical
	17.0 to 26.5 GHz	+16 dBm	+22 dBm typical
For millimeter-wave only (Option 544 and 550)	3.5 to 8.4 GHz	+16 dBm	+23 dBm typical
	8.3 to 13.6 GHz	+16 dBm	+23 dBm typical
	13.5 to 17.1 GHz	+13 dBm	+17 dBm typical
	17.0 to 26.5 GHz	+13 dBm	+20 dBm typical
	26.4 to 34.5 GHz	+13 dBm	+18 dBm typical
	34.4 to 50 GHz	+10 dBm	+15 dBm typical
Preamp on (Option P03, P08, P13, P26, P44, and P50)			
Tones at preamp input			
– (two -45 dBm)	10 to 500 MHz		+4 dBm nominal
– (two -45 dBm)	500 MHz to 3.6 GHz		+4.5 dBm nominal
– (two -50 dBm)	3.6 to 26.5 GHz		-15 dBm nominal

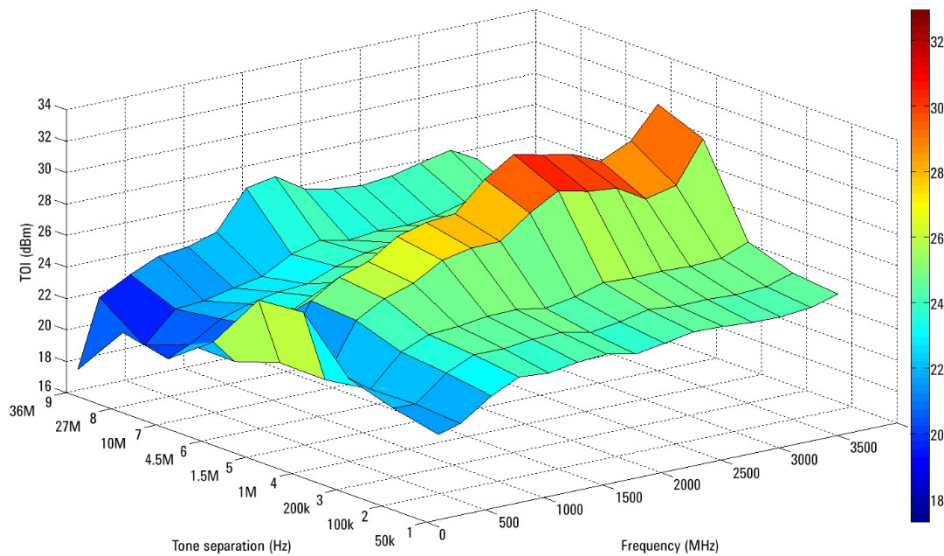


Figure 1. Nominal TOI performance versus frequency and tone separation

Phase noise	Offset	Specification	Typical
Noise sidebands (20 to 30 °C, CF = 1 GHz)			
Standard LO	10 Hz		-80 dBc/Hz nominal
	100 Hz	-94 dBc/Hz	-100 dBc/Hz typical
	1 kHz	-121 dBc/Hz	-125 dBc/Hz typical
	10 kHz	-129 dBc/Hz	-132 dBc/Hz typical
	30 kHz	-130 dBc/Hz	-132 dBc/Hz typical
	100 kHz	-129 dBc/Hz	-131 dBc/Hz typical
	1 MHz	-145 dBc/Hz	-146 dBc/Hz typical
	10 MHz	-155 dBc/Hz	-158 dBc/Hz typical
DDS LO (Option EP0)	10 Hz		-95 dBc/Hz typical ¹
	100 Hz	-107 dBc/Hz	-112 dBc/Hz typical
	1 kHz	-125 dBc/Hz	-129 dBc/Hz typical
	10 kHz	-134 dBc/Hz	-136 dBc/Hz typical
	100 kHz	-139 dBc/Hz	-141 dBc/Hz typical
	1 MHz	-145 dBc/Hz	-146 dBc/Hz typical
	10 MHz	-155 dBc/Hz	-157 dBc/Hz typical
	Option MPB, Microwave Preselector Bypass ²		
Frequency range			
N9030B-508	3.6 to 8.4 GHz		
N9030B-513	3.6 to 13.6 GHz		
N9030B-526	3.6 to 26.5 GHz		
N9030B-544	3.6 to 44 GHz		
N9030B-550	3.6 to 50 GHz		

- For wide reference loop bandwidth
- When Option MPB is installed and enabled, some aspects of the analyzer performance change. Please refer to the PXA specification guide for more details.

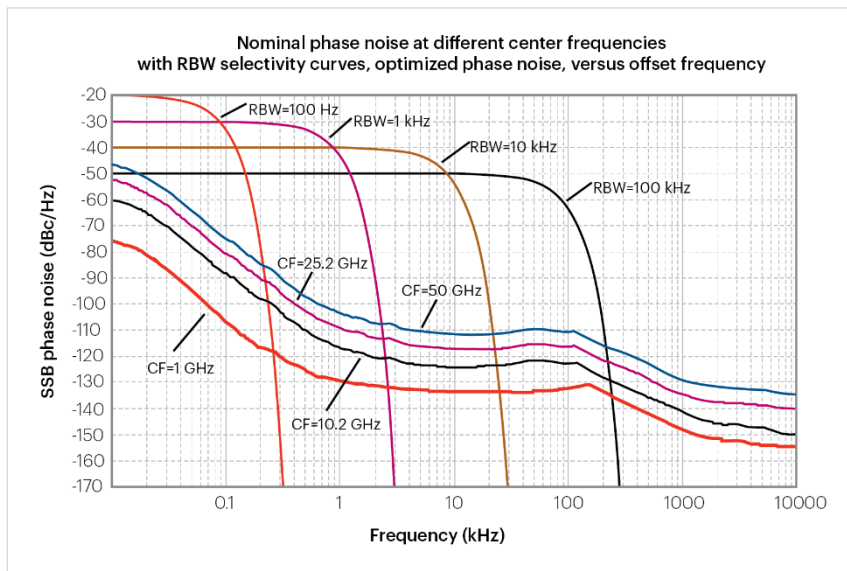


Figure 2. Nominal PXA phase noise at various center frequencies with standard LO

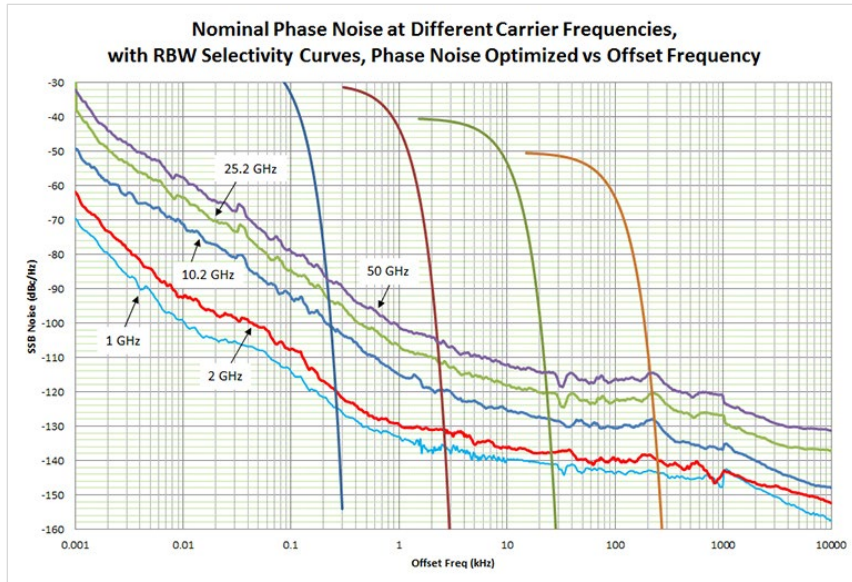


Figure 3. Nominal PXA phase noise at various center frequencies with DDS LO (Option EP0)

PowerSuite Measurement Specifications

Channel power		
Amplitude accuracy, W-CDMA or IS95 (20 to 30 °C, attenuation = 10 dB)	±0.61 dB (±0.19 dB 95th percentile)	
Occupied bandwidth		
Frequency accuracy	± [span/1000] nominal	
Adjacent channel power		
Accuracy, 3GPP W-CDMA (ACLR) (at specific mixer levels and ACLR ranges)	Adjacent	Alternate
MS (UE)	±0.08 dB	±0.09 dB
BTS	±0.22 dB	±0.18 dB
Dynamic range (typical)		
Without noise correction	-81.5 dB	-87 dB
With noise correction	-82.5 dB	-88 dB
Offset channel pairs measured	1 to 6	
Multi-carrier ACP		
Accuracy, 3GPP W-CDMA (ACPR) (4 carriers, 5 MHz offset, BTS, UUT ACPR range at -42 to -48 dB, optimal mixer level at -21 dBm)	±0.09 dB	
Multiple number of carriers measured	Up to 12	
Power statistics CCDF		
Histogram resolution	0.01 dB	
Harmonic distortion		
Maximum harmonic number	10th	
Result	Fundamental power (dBm), relative harmonics power (dBc), total harmonic distortion in %	
Intermod (TOI)	Measure the third-order products and intercepts from two tones	
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		
3GPP W-CDMA table-driven spurious signals; search across regions		
Dynamic range (RBW=1 MHz) (1 to 3.6 GHz)	88.8 dB	91.8 dB typical
Absolute sensitivity (RBW=1 MHz) (1 to 3.6 GHz)	-88.5 dBm	-91.5 dBm typical
Spectrum emission mask (SEM)		
cdma2000® (750 kHz offset)		
Relative dynamic range (30 kHz RBW)	85.9 dB	89.5 dB typical
Absolute sensitivity	-103.7 dBm	-106.7 dBm typical
Relative accuracy	±0.08 dB	
3GPP W-CDMA (2.515 MHz offset)		
Relative dynamic range	87.9 dB	92.6 dB typical
Absolute sensitivity	-103.7 dBm	-106.7 dBm typical
Relative accuracy	±0.08 dB	

General Specifications

Temperature range		
Operating	0 to 55 °C	
Storage	-40 to 70 °C	
Altitude		
	4,500 meters (approx 15,000 feet)	
EMC		
Complies with the essential requirements of the European EMC Directive as well as current editions of the following standards (dates and editions are cited in the Declaration of Conformity).		
<ul style="list-style-type: none"> • IEC/EN 61326-1 • CISPR 11 Group 1, Class A • AS/NZS CISPR 11 • ICES/NMB-001 		
This ISM device complies with Canadian ICES-001		
Cet appareil ISM est conforme à la norme NMB-001 du Canada		
South Korean Class A EMC declaration		
This equipment is Class A suitable for professional use and is for use in electromagnetic environments outside of the home.		
A 급 기기 (업무용 방송통신기자재)이 기기는 업무용 (A 급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.		
Safety		
Complies with the essential requirements of the European Low Voltage Directive as well as current editions of the following standards (dates and editions are cited in the Declaration of Conformity)		
<ul style="list-style-type: none"> • IEC/EN 61010-1 • Canada: CSA C22.2 No. 61010-1 • U.S.A.: UL 61010-1 		
Acoustic statement (European Machinery Directive)		
Acoustic noise emission		
LpA < 70 dB		
Operator position		
Normal position per ISO 7779		
Acoustic noise - more information		
(Values given are per ISO 7779 standard in the "Operator Sitting" position)		
Ambient temperature	< 40 °C	Nominally under 55 dBA Sound Pressure. 55 dBA is generally considered suitable for use in quiet office environment
	≥ 40 °C	Nominally under 65 dBA Sound Pressure. 65 dBA is generally considered suitable for use in noisy office environment
Environmental stress		
Samples of this product have been type tested in accordance with the Keysight 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.		
Power requirements		
Voltage and frequency	100 /120 V, 50/60/400 Hz	The instruments can operate with mains supply voltage fluctuations up to ±10% of the nominal voltage
	220/240 V, 50/60 Hz	
Power consumption	On	630 W (maximum)
	Standby	45 W
Display		
Resolution	1280 x 800	
Size	269 mm (10.6 in.) diagonal (nominal) capacitive multi-touch screen	
Data storage		
Internal	Removable solid state drive (≥ 160 GB) and secure digital (SD) memory device	
External	Supports USB 3.0/2.0 compatible memory devices	

Weight (without options)	
Net	22 kg (48 lbs) nominal
Shipping	34 kg (75 lbs) nominal
Dimensions	
Height	177 mm (7.0 in)
Width	426 mm (16.8 in)
Length	556 mm (21.9 in)
Calibration cycle	
The recommended calibration cycle is one year. Calibration services are available through Keysight service centers	

Inputs and Outputs

Front panel		
RF input connector		
Standard (Option 503, 508, 513, 526)	Type-N female, 50 Ω nominal	
Option C35 (with Option 526 only)	APC 3.5 mm male, 50 Ω nominal	
Standard (Option 544, 550)	2.4 mm male, 50 Ω nominal	
Analog baseband IQ inputs (Option BBA) ¹		
Connectors (I, Q, I-Bar, Q-Bar, and Cal Out)	BNC female	
Cal Out	AC coupled square wave	
Signal	Selectable between 1 kHz and 250 kHz	
Frequency	50 Ω , 1 M Ω (selectable, nominal)	
Input impedance (4 connectors: I, Q, I-, Q-)		
Probes supported ²		
Active probe	1130A, 1131A, 1132A, 1134A	
Passive probe	1161A	
Input return loss	-5 dB (0 to 10 MHz, nominal)	
50 Ω impedance only selected	-0 dB (10 to 40 MHz, 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 ports		
Host (3 ports)	Standard	Compatible with USB 2.0
	Connector	USB Type-A female
Output current	Port marked with lightning bolt	1.2 A nominal
	Ports not marked with lightning bolt	0.5 A nominal
Headphone jack	Miniature stereo audio jack (3.5 mm, also known as "1/8 inch")	

1. For additional specifications, please refer to Chapter BBA in the PXA Signal Analyzer specification guide.

2. For more details, please refer to the Keysight Probe Configuration Guides, literature numbers 5968-7141EN and 5989-6162EN; probe heads are necessary to attach to your device properly and probe connectivity kits such as E2668B, E2669A, or E2675A are required.

External mixing, Option EXM		
Connection port	Connector	SMA, female
	Impedance	50 Ω nominal
	Functions	Triplexed for mixer bias, IF input and LO output
Mixer bias range		± 10 mA in 10 μ A step
IF input center frequency	≤ 25 MHz IF path	322.5 MHz
	40 MHz BW IF path	250.0 MHz
	85 or 160 MHz BW IF path	300 MHz
	255 MHz BW IF path	750.0 MHz
	510 MHz BW IF path	877.1484375 MHz
LO output frequency range		3.75 to 14.0 GHz
Rear panel		
10 MHz out	Connector	BNC female, 50 Ω nominal
	Output amplitude	≥ 0 dBm nominal
	Frequency	10 MHz \pm (10 MHz x frequency reference accuracy)
Ext Ref In	Connector	BNC female, 50 Ω nominal
	Input amplitude range	-5 to 10 dBm nominal
	Input frequency	1 to 50 MHz nominal (selectable to 1 Hz resolution)
	Frequency lock range	$\pm 2 \times 10^{-6}$ of specified external reference input frequency
Trigger 1 and 2 inputs	Connector	BNC female
	Impedance	> 10 k Ω nominal
	Trigger level range	-5 to +5 V (TTL) factory preset
Trigger 1 and 2 outputs	Connector	BNC female
	Impedance	50 Ω nominal
	Level	0 to 5 V (CMOS) nominal
Sync (reserved for future use)	Connector	BNC female
Monitor output 1 (Option PC6, PC6S, PC8 CPUs)	Connector	VGA compatible, 15-pin mini D-SUB
	Format	XGA (60 Hz vertical sync rates, non-interlaced) Analog RGB
	Resolution	1024 x 768
Monitor output 2 (Option PC6, PC6S, PC8 CPUs)	Connector	Mini DisplayPort
	Resolution	1024 x 768
Monitor Output (Option PCA CPU)	Connector	DisplayPort
	Resolution	1280 x 800
Noise source drive +28 V (pulsed)	Connector	BNC female
	Output voltage	On 28.0 \pm 0.1 V (60 mA maximum) Off < 1 V
SNS series noise source		For use with the Agilent/Keysight SNS Series noise sources
Digital bus	Connector	MDR-80
Analog out	Connector	BNC female

Rear panel		
USB ports (Option PC6, PC6S, PC8 CPUs)		
Host, super speed		2 ports (stacked with each other)
Standard		Compatible with USB 3.0
Connector		USB Type-A female
Output current		0.9 A
Host		1 port (stacked with LAN)
Standard		USB 2.0
Connector		USB Type-A female
Output current		0.5 A
Device	Standard	Compatible with USB 3.0
	Connector	USB Type-B female
USB ports (Option PCA CPU)		
Host, super speed		4 ports
Standard		Compatible with USB 3.0
Connector		USB Type-A female
Output current		0.9 A
Device	Standard	Compatible with USB 3.0
	Connector	USB Type-B female
Thunderbolt (Option PCA CPU)	Connector	USB Type-C female, 2 ports
	Output power	5V, 1.0 A max
GPIB interface	Connector	IEEE-488 bus connector
	GPIB codes	SH1, AH1, T6, SR1, RL1, PP0, DC1, C1, C2, C3, C28, DT1, L4, C0
	GPIB mode	Controller or device
LAN TCP/IP interface (Option PC6, PC6S, PC8 CPUs)	Standard	1G Base-T
	Connector	RJ45 Ethertwist
LAN TCP/IP interface (Option PCA CPU)	Standard	1G Base-T
	Connector	RJ45 Ethertwist
	Standard	10G Base-T
	Connector	RJ45 Ethertwist
IF output	Connector	SMA female, shared by Opts CR3, CRP, and ALV
	Impedance	50 Ω nominal
2nd IF output, Option CR3		
Center frequency	SA mode or I/Q analyzer with IF BW \leq 25 MHz	322.5 MHz
	with Option B40	250 MHz
	with Option B85/B1X	300 MHz
	with Option B2X	750 MHz
	with Option B5X	877.1484375 MHz
Conversion gain		-1 to +4 dB (nominal) plus RF frequency response

Rear panel		
Bandwidth		
Low band	IF Path \leq 160 MHz	Up to 160 MHz (nominal)
	IF Path 255 MHz	Up to 255 MHz (nominal)
	IF Path 510 MHz	Up to 510 MHz (nominal)
High band, with preselector		Depends on center frequency
High band, with preselector bypassed ¹		Up to 700 MHz (nominal); expandable to 900 MHz with corrections
Programmable IF output, Option CRP		
Center frequency	Range	10 to 75 MHz (user selectable)
	Resolution	0.5 MHz
Conversion gain		-1 to +4 dB (nominal) plus RF frequency response
Bandwidth		
Output at 70 MHz	100 MHz (nominal)	100 MHz (nominal)
	Depends on RF center frequency	Depends on RF center frequency
Lower output frequencies		Subject to folding
Residual output signals		\leq -88 dBm (nominal)

1. The maximum bandwidth is not centered around the IF output center frequency

Other Optional Output

Option ALV Log video out

General port specifications		
Connector	SMA female	Shared with other options
Impedance		50 Ω nominal
Fast log video output		
Output voltage		Open-circuit voltages shown
Maximum		1.6 V at -10 dBm nominal
Slope		25 \pm 1 mV/dB nominal
Log fidelity	Range	49 dB (nominal) with input frequency at 1 GHz
	Accuracy within range	\pm 1.0 dB nominal
Rise time		15 ns nominal
Fall time	Bands 1-4 with Option MPB	40 ns nominal best case
	Other cases	Depends on bandwidth

Option YAV Y-Axis output

General port specifications			
Connector	BNC female	Shared with other options	
Impedance		50 Ω nominal	
Screen video			
Operating conditions	Display scale types	Log or Lin	"Lin" is linear in voltage
	Log scales	All (0.1 to 20 dB/div)	
	Modes	Spectrum analyzer only	
	Gating	Gating must be off	
Output scaling	0 to 1.0 V open circuit, representing bottom to top of screen		
Offset	$\pm 1\%$ of full scale nominal		
Gain accuracy	$\pm 1\%$ of output voltage nominal		
Delay between RF input to analog output	71.7 μs + 2.56/RBW + 0.159/VBW nominal		
Log video (log envelope) output			
Amplitude range (terminated with 50 Ω)	Maximum	1.0 V nominal for -10 dBm at the mixer	
	Scale factor	1 V per 192.66 dB	
	Bandwidth	Set by RBW	
	Operating conditions	Select Sweep Type = Swept	
Linear video (AM Demod) output			
Amplitude range (terminated with 50 Ω)			
Maximum	1.0 V nominal for signal envelope at the reference level		
Minimum	0 V		
Scale factor	If carrier level is set to half the reference level in volts, the scale factor is 200% of carrier level per volt. Regardless of the carrier level, the scale factor is 100% of reference level per volt.		
Bandwidth	Set by RBW		
Operating conditions	Select Sweep Type = Swept		

I/Q Analyzer

Frequency						
Frequency span	Option B25 (standard)	10 Hz to 25 MHz				
	Option B40	10 Hz to 40 MHz				
	Option B85	10 Hz to 85 MHz				
	Option B1X	10 Hz to 160 MHz				
	Option B2X	10 Hz to 255 MHz				
	Option B5X	10 Hz to 510 MHz				
Resolution bandwidth (spectrum measurement)						
Range	Overall	100 mHz to 3 MHz				
	Span = 1 MHz	50 Hz to 3 MHz				
	Span = 10 kHz	1 Hz to 10 kHz				
	Span = 100 Hz	100 mHz to 100 Hz				
	Window shapes	Flat Top, Uniform, Hanning, Hamming, Gaussian, Blackman, Blackman-Harris, Kaiser Bessel (K-B 70 dB, K-B 90 dB and K-B 110 dB)				
Analysis bandwidth (waveform measurement)						
Option B25 (standard)		10 Hz to 25 MHz				
Option B40		10 Hz to 40 MHz				
Option B85		10 Hz to 85 MHz				
Option B1X		10 Hz to 160 MHz				
Option B2X		10 Hz to 255 MHz				
Option B5X		10 Hz to 510 MHz				
IF frequency response (standard 10 MHz IF path)						
IF frequency response (demodulation and FFT response relative to the center frequency)						
Freq (GHz)	Analysis BW (MHz)	Max error	Midwidth error (95th percentile)	Slope (dB/MHz) (95th percentile)	RMS (nominal)	
≤ 3.6	≤ 10	±0.20 dB	±0.12 dB	±0.10 dB	0.02 dB	
3.6 to 26.5	≤ 10 preselected				0.23 dB	
3.6 to 26.5	≤ 10 preselector off ¹	±0.25 dB	±0.12 dB	±0.10 dB	0.02 dB	
26.5 to 50	≤ 10 preselected				0.12 dB	
26.5 to 50	≤ 10 preselected off ¹	±0.30 dB	±0.12 dB	±0.10 dB	0.024 dB	
IF phase linearity						
Center freq (GHz)	Span (MHz)	Preselector	Peak-to-peak (nominal)		RMS (nominal)	
			Std LO	DDS LO	Std LO	DDS LO
≥ 0.02, < 3.6	≤ 10	NA	0.06°	0.17°	0.012°	0.037°
≥ 3.6	≤ 10	Off ¹	0.10°	0.31°	0.022°	0.067°
≥ 3.6	≤ 10	On	0.11°	0.83°	0.024°	0.170°

1. Option MPB is installed and enabled

Dynamic range (standard 10 MHz IF path)						
Clipping-to-noise dynamic range		Excluding residuals and spurious responses				
Clipping level at mixer		Center frequency		≥ 20 MHz		
IF gain = Low		-10 dBm		-8 dBm nominal		
IF gain = High		-20 dBm		-17.5 dBm nominal		
Noise density at mixer at center frequency		(DANL + IF Gain effect) + 2.25 dB				
Data acquisition (standard 10 MHz IF path)						
Time record length						
Analysis tool						
IQ analyzer		32,000,001 IQ sample pairs		Waveform measurement		
Advanced tools		Data packing		89600 VSA software or fast capture		
		32-bit	64-bit			
Length (IQ sample pairs)		536 MSa (2 ²⁹ Sa)	268 MSa (2 ²⁸ Sa)	2 GB total memory		
Length (time units)		Samples/Sample rate (IQ pair)				
Sample rate						
IQ pairs		Span x 1.25				
ADC resolution		16 bits				
IF frequency response (standard 25 MHz IF path)						
IF frequency response (demodulation and FFT response relative to the center frequency)						
Freq (GHz)	Analysis BW (MHz)	Max error	Midwidth error (95th percentile)	Slope (dB/MHz) (95th percentile)	RMS (nominal)	
< 3.6	10 to ≤ 25	±0.30 dB	±0.12 dB	±0.10 dB	0.05 dB	
3.6 to 26.5	10 to ≤ 25 preselected				0.50 dB	
3.6 to 26.5	10 to ≤ 25 preselector off ¹	±0.40 dB	±0.12 dB	±0.10 dB	0.04 dB	
26.5 to 50	10 to ≤ 25 preselected				0.31 dB	
26.5 to 50	10 to ≤ 25 preselector off ¹	±0.40 dB			0.02 dB	
IF phase linearity						
			Peak-to-peak (nominal)		RMS (nominal)	
Center freq (GHz)	Span (MHz)	Preselector	Std LO	DDS LO	Std LO	DDS LO
≥ 0.02, < 3.6	≤ 25	NA	0.48°	0.47°	0.12°	0.12°
≥ 3.6	≤ 25	Off ¹	0.85°	1.1°	0.20°	0.28°
Dynamic range (standard 25 MHz IF path)						
Full scale (ADC clipping)						
Default settings, signal at CF (IF gain = Low)	Band 0	-8 dBm mixer level nominal				
	Bands 1 through 4	-7 dBm mixer level nominal				
High gain setting, signal at CF (IF gain = High)	Band 0	-18 dBm mixer level nominal, subject to gain limitations				
	Bands 1 through 4	-17 dBm mixer level nominal, subject to gain limitations				
Effect of signal frequency ≠ CF		Up to ±3 dB nominal				
Data acquisition (standard 25 MHz IF path)						
Time record length						
Analysis tool						
IQ analyzer		32,000,001 IQ sample pairs		Waveform measurement		
Advanced tools		Data packing		89600 VSA software or fast capture		
		32-bit	64-bit			
Length (IQ sample pairs)		536 MSa (2 ²⁹ Sa)	268 MSa (2 ²⁸ Sa)	2 GB total memory		
Length (time units)		Samples/Sample rate (IQ pair)				
Sample rate						
IQ pairs		Span x 1.25				
ADC resolution		16 bits				

1. Option MPB is installed and enabled

Option B40 40 MHz analysis bandwidth (Option B40 is automatically included in Option B85, B1X, B2X, or B5X)

IF frequency response (40 MHz IF path)						
IF frequency response (relative to center frequency)						
Center freq. (GHz)	Span (MHz)	Preselector		Typical	RMS (nominal)	
– ≥ 0.03, < 3.6	≤ 40	NA	±0.4 dB	±0.25 dB	0.05 dB	
– ≥ 3.6, ≤ 8.4	≤ 40	Off ¹	±0.4 dB	±0.16 dB	0.05 dB	
– > 8.4, ≤ 26.5	≤ 40	Off ¹	±0.7 dB	±0.20 dB	0.05 dB	
– ≥ 26.5, < 34.4	≤ 40	Off ¹	±0.8 dB	±0.25 dB	0.1 dB	
– ≥ 34.4, < 50	≤ 40	Off ¹	±1.0 dB	±0.35 dB	0.1 dB	
IF phase linearity (deviation from mean phase linearity)						
Center freq (GHz)	Span (MHz)	Preselector	Peak-to-peak (nominal)		RMS (nominal)	
			Std LO	DDS LO	Std LO	DDS LO
≥ 0.03, < 3.6	≤ 40	NA	0.16°	0.5°	0.041°	0.12°
≥ 3.6	≤ 40	Off ¹	1.5°	1.24°	0.35°	0.32°
EVM (EVM measurement floor for an 802.11g OFDM signal, using 89600 VSA software equalization, channel estimation and data EQ)						
2.4 GHz	–52.0 dB (0.25%) nominal					
5.8 GHz with Option MPB	–49.1 dB (0.35%) nominal					
Dynamic range (40 MHz IF path)						
SFDR (Spurious-free dynamic range)						
Signal frequency within ±12 MHz of center		–80 dBc nominal				
Signal frequency anywhere within analysis BW						
Spurious response within ±18 MHz of center		–79 dBc nominal				
Response anywhere within analysis BW		–77 dBc nominal				
Full scale (ADC clipping)		Mixer level (nominal)				
Default setting, signal at CF (IF gain = Low: IF gain offset = 0 dB)	Band 0	Std LO	DDS LO, RF/MW	DDS LO, mmW		
	Bands 1 through 4	–8 dBm	–7 dBm	–8 dBm		
	Bands 5 through 6	–7 dBm	–5.5 dBm	–7 dBm		
High gain setting, signal at CF (IF gain = High)	Mixer level (nominal), subject to gain limitations					
	Band 0	–18 dBm	–13 dBm	–13 dBm		
	Bands 1 through 2	–17 dBm	–9 dBm	–17 dBm		
	Bands 3 through 4	–17 dBm	–4 dBm	–16 dBm		
	Bands 5 through 6	–17 dBm		–15 dBm		
Effect of signal frequency ≠ CF		Up to ±3 dB nominal				

1. Option MPB is installed and enabled

Option B40 40 MHz analysis bandwidth

Data acquisition (40 MHz IF path)			
Time record length			
Analysis tool			
IQ analyzer	32,000,001 IQ sample pairs	Waveform measurement	
Advanced tools	Data packing		89600 VSA software or fast capture
	32-bit	64-bit	
Length (IQ sample pairs)	536 MSa (2 ²⁹ Sa)	268 MSa (2 ²⁸ Sa)	2 GB total memory
Length (time units)	Samples/Sample rate (IQ pair)		
Sample rate			
IQ pairs	Span x 1.25		
ADC resolution	12 bits		

Option B85 85 MHz or B1X 160 MHz analysis bandwidth

IF frequency response (85 or 160 MHz IF path)					
IF frequency response (relative to center frequency)					
Center freq. (GHz)	Span (MHz)	Preselector		Typical	RMS (nominal)
≥ 0.1, < 3.6	≤ 85	NA	±0.6 dB	±0.17 dB	0.05 dB
	≤ 140	NA	±0.6 dB	±0.25 dB	0.05 dB
	≤ 160	NA		±0.2 dB (nom)	0.07 dB
≥ 3.6, ≤ 8.4	≤ 85	Off ¹	±0.73 dB	±0.2 dB	0.05 dB
	≤ 140	Off ¹	±0.8 dB	±0.35 dB	0.05 dB
	≤ 160	Off ¹		±0.3 dB (nom)	0.07 dB
> 8.4, ≤ 26.5	≤ 85	Off ¹	±1.10 dB	±0.50 dB	0.1 dB
	≤ 140	Off ¹	±1.30 dB	±0.75 dB	0.1 dB
	≤ 160	Off ¹		±0.5 dB (nom)	0.12 dB
≥ 26.5, ≤ 50	≤ 85	Off ¹		±0.45 dB	0.12 dB
	≤ 140	Off ¹	±1.20 dB	±0.65 dB	0.12 dB
IF phase linearity (deviation from mean phase linearity)					
Center freq (GHz)	Span (MHz)	Preselector		Peak-to-peak (nominal)	RMS (nominal)
≥ 0.03, < 3.6	≤ 140	NA		0.9°	0.20°
≥ 3.6	≤ 160	NA		1.7°	0.42°
	≤ 140	Off ¹		1.6°	0.39°
	≤ 160	Off ¹		2.8°	0.64°

1. Option MPB is installed and enabled

EVM (EVM measurement floor)		Customized settings required, preselector bypassed (Option MPB) above Band 0	
Case 1: 62.5 Msymbol/s, 16 QAM signal, RRC filter alpha of 0.2, non-equalized, with approximately 75 MHz occupied bandwidth			
Band 0, 1.8 GHz	0.8% nominal		
Band 0, 1.8 GHz	1.1% nominal		
Case 2: 104.167 Msymbol/s, 16 QAM signal, RRC filter alpha of 0.35, non-equalized, with approximately 140 MHz occupied bandwidth			
Band 1, 5.95 GHz	3.0% nominal, (unequalized)	0.5% nominal, (equalized)	
Band 2, 15.3 GHz	2.5% nominal, (unequalized)	0.6% nominal, (equalized)	
Band 4, 26 GHz	3.5% nominal, (unequalized)	1.6% nominal, (equalized)	
Dynamic range (85 or 160 MHz IF path)			
SFDR (Spurious-free dynamic range)			
Signal frequency within ± 12 MHz of center	-75 dBc nominal		
Signal frequency anywhere within analysis BW			
Spurious response within ± 63 MHz of center	-74 dBc nominal		
Response anywhere within analysis BW	-72 dBc nominal		
Full scale (ADC clipping)			
Default settings, signal at CF (IF gain = Low: IF gain offset = 0 dB)			
Band 0	-8 dBm mixer level nominal		
Band 1 through 4	-7 dBm mixer level nominal		
High gain setting, signal at CF (IF gain = High)			
Band 0	-18 dBm mixer level nominal, subject to gain limitations		
Band 1 through 4	-17 dBm mixer level nominal, subject to gain limitations		
Effect of signal frequency \neq CF	Up to ± 3 dB nominal		
Data acquisition (85 or 160 MHz IF path)			
Time record length			
Analysis tool			
IQ analyzer	32,000,001 IQ sample pairs		
Advanced tools	Data packing		89600 VSA software or fast capture
	32-bit	64-bit	
Length (IQ sample pairs)	536 MSa (2^{29} Sa)	268 MSa (2^{28} Sa)	2 GB total memory
Length (IQ sample pairs)	1073 MSa (2^{30} Sa)	536 MSa (2^{29} Sa)	4 GB total memory (Option DP4)
Length (time units)	Samples/Sample rate (IQ pair)		
Sample rate			
IQ pairs	Span x 1.25		
ADC resolution	14 bits		

Option B2X 255 MHz analysis bandwidth (Option B2X is automatically included with Option B5X)

IF frequency response (255 MHz IF path)					
Center freq. (GHz)	Span (MHz)	Preselector	Specification	Typical	RMS (nominal)
≥ 0.4, < 3.6	≤ 255	NA	±0.75 dB	±0.3 dB	0.1 dB
> 3.6, ≤ 8.4	≤ 255	Off ¹	±0.85 dB	±0.34 dB	0.1 dB
> 8.4, ≤ 26.5	≤ 255	Off ¹		±0.6 dB nominal	0.2 dB
> 26.5	≤ 255	Off ¹		±0.8 dB nominal	0.2 dB
IF phase linearity (255 MHz IF path)					
Center freq (GHz)	Span (MHz)	Preselector		Pk-to-pk (nominal)	RMS (nominal)
≥ 0.4, < 3.6	≤ 255	NA		3°	0.6°
≥ 3.6, < 26.5	≤ 255	Off ¹		2°	0.5°
≥ 26.5	≤ 255	Off ¹		4°	0.8°
Dynamic range (255 MHz IF path)					
Spurious-free dynamic range (SFDR) Anywhere within the analysis BW				-78 dBc nominal	
Full scale (ADC clipping)			Mixer level		
			RF/MW (Opt 508, 513, 526)	mmW (Opt 544, 550)	
Default setting, signal at CF (IF gain = Low: IF gain offset = 0 dB)			Band 0	+3 dBm nominal	+2 dBm nominal
			Bands 1 through 2	+4 dBm nominal	-6 dBm nominal
			Bands 3 through 4	+1 dBm nominal	-9 dBm nominal
			Bands 5 through 6		-11 dBm nominal
High gain setting, signal at CF (IF gain = High)			Mixer level, subject to gain limitations		
			Band 0	-4 dBm nominal	+2 dBm nominal
			Bands 1 through 2	+2.5 dBm nominal	+3 dBm nominal
			Bands 3 through 4	+1 dBm nominal	0 dBm nominal
Effect of signal frequency ≠ CF			Up to ±4 dB nominal		
IF residual responses across the full BW			Band 0	Preselector off ¹	-110 dBFS nominal
			Band 1		-108 dBFS nominal
Third-order intermodulation distortion (Two tones of equal level, 1 MHz separation, each tone -23 dB relative to full scale (ADC clipping), IF gain = high)			Band 0		-85 dBc nominal
			Bands 1 through 4	Preselector off ¹	-85 dBc nominal
			Bands 5 through 6	Preselector off ¹	-80 dBc nominal
Noise density	Band	Frequency (GHz)	IF gain = Low	IF gain = High	
	0	1.80	-144 dBm/Hz	-145 dBm/Hz	
	1	6.00	-141 dBm/Hz	-141 dBm/Hz	
	2	10.80	-140 dBm/Hz	-140 dBm/Hz	
	3	15.15	-137 dBm/Hz	-137 dBm/Hz	
	4	21.80	-135 dBm/Hz	-135 dBm/Hz	
	5	30.50	-130 dBm/Hz	-130 dBm/Hz	
6	42.25	-130 dBm/Hz	-130 dBm/Hz		

Data acquisition (255 MHz IF path)			
Time record length			
IQ analyzer	32,000,001 IQ sample pairs		Waveform measurement
Advanced tools	Data packing		89600 VSA or fast capture
	32-bit	64-bit	
Length (IQ sample pairs)	1073 MSa (230 Sa)	536 MSa (229 Sa)	4 GB total memory (Option DP4)
Maximum IQ capture time (89600 VSA and fast capture)	Length of IQ sample pairs/sample rate (IQ pairs)		
Sample rate (IQ pairs)	Minimum of (1.25 x IFBW, 300 MSa/s)		
ADC resolution	14 bits		

Option B5X 510 MHz analysis bandwidth

IF frequency response (510 MHz IF path)					
Center freq (GHz)	Span (MHz)	Preselector	Specification	Typical	RMS (nominal)
≥ 0.6, < 3.6	≤ 500	NA	±1.0 dB	±0.41 dB	0.06 dB
> 3.6, ≤ 8.4	≤ 500	Off ¹	±1.25 dB	±0.42 dB	0.3 dB
> 8.4, ≤ 26.5	≤ 510	Off ¹		±0.8 dB nominal	
> 26.5	≤ 510	Off ¹		±1.0 dB nominal	
IF phase linearity (510 MHz IF path)					
Center freq (GHz)	Span (MHz)	Preselector		Pk-to-pk (nominal)	RMS (nominal)
≥ 0.4, < 3.6	≤ 510	NA		5°	1°
≥ 3.6, < 26.5	≤ 510	Off		6°	1.4°
≥ 26.5	≤ 510	Off ¹		7°	1.6°
Dynamic range (510 MHz IF path)					
Spurious-free dynamic range (SFDR) Anywhere within the analysis BW				-78 dBc nominal	
Full scale (ADC clipping)			Mixer level		
Default setting, signal at CF (IF gain = Low: IF gain offset = 0 dB)			RF/MW (Opt 508, 513, 526)	mmW (Opt 544, 550)	
	Band 0			+2 dBm nominal	
	Bands 1 through 2		+2 dBm nominal	-6 dBm nominal	
	Bands 3 through 4		+3 dBm nominal	-9 dBm nominal	
	Bands 5 through 6		+1 dBm nominal	-11 dBm nominal	
High gain setting, signal at CF (IF gain = High)			Mixer level, subject to gain limitations		
	Band 0		-3.5 dBm nominal	+2 dBm nominal	
	Bands 1 through 2		-1 dBm nominal	+3 dBm nominal	
	Bands 3 through 4		+1 dBm nominal	0 dBm nominal	
	Bands 5 through 6			-11 dBm nominal	
Effect of signal frequency ≠ CF			Up to ±4 dB nominal		

1. MPB (microwave preselector bypass) is enabled. All UXA ship with MPB as a standard feature.

IF residual responses across the full BW		Band 0	Preselector off ¹		-104 dBFS nominal
		Band 1			-103 dBFS nominal
Third-order intermodulation distortion (Two tones of equal level, 1 MHz separation, each tone -23 dB relative to full scale (ADC clipping), IF gain = high)		Band 0			
		Bands 1 through 2	Preselector off ¹		-82 dBc nominal
		Bands 3 through 4	Preselector off ¹		-80 dBc nominal
		Bands 5 through 6	Preselector off ¹		-79 dBc nominal
Noise density	Band	Frequency (GHz)	IF gain = Low	IF gain = High	
	0	1.80	-144 dBm/Hz	-144 dBm/Hz	
	1	6.00	-140 dBm/Hz	-142 dBm/Hz	
	2	10.80	-140 dBm/Hz	-141 dBm/Hz	
	3	15.15	-137 dBm/Hz	-137 dBm/Hz	
	4	21.80	-135 dBm/Hz	-135 dBm/Hz	
	5	30.50	-130 dBm/Hz	-130 dBm/Hz	
6	42.25	-130 dBm/Hz	-130 dBm/Hz		
Data acquisition (510 MHz IF path)					
Time record length					
IQ analyzer		32,000,001 IQ sample pairs		Waveform measurement	
Advanced tools		Data packing		89600 VSA or fast capture	
		32-bit	64-bit		
Length (IQ sample pairs)	IFBW ≤ 255.176 MHz	1073 MSa (2 ³⁰ Sa)	536 MSa (2 ²⁹ Sa)	4 GB total memory (Option DP4)	
	IFBW > 255.176 MHz	2,147 MSa (2 ³¹ Sa)	1073 MSa (2 ³⁰ Sa)	8 GB total memory (Option DP4)	
Maximum IQ capture time (89600 VSA and fast capture)			Length of IQ sample pairs/sample rate (IQ pairs)		
Sample rate (IQ pairs)	IFBW ≤ 255.176 MHz	Minimum of (1.25 × IFBW, 300 MSa/s)			
	IFBW > 255.176 MHz	Minimum of (1.25 × IFBW, 600 MSa/s)			
ADC resolution	ADC resolution	14 bits			

1. MPB (microwave preselector bypass) is enabled. All UXA ship with MPB as a standard feature.

Real-Time Spectrum Analyzer (RTSA) ¹

Option RT1 or RT2

Real-time analysis

Data acquisition (255 MHz IF path)			
Real-time analysis bandwidth	Option RT1	Up to 509.47 MHz	Analysis BW option determines the max real-time bandwidth
	Option RT2	Up to 509.47 MHz	Analysis BW option determines the max real-time bandwidth
	Option DUA	Up to 2 x 255 MHz at same center frequency	Requires Option B5X
Minimum detectable signal duration with > 60 dB	Option B85	11.42 ns	
	Option B1X	5.0 ns	
	Option B2X or B5X	3.33 ns	
Minimum signal duration with 100% probability of intercept (POI) at full amplitude accuracy			For Frequency Mask Triggering (FMT)
Option RT1		17.3 µs	Signal is at mask level
Option RT2		3.57 µs	Signal is at mask level
Minimum acquisition time		104 µs	
FFT rate		292,969/s	

1. For additional RTSA specifications, please refer to Option RT1/RT2 Chapter in the PXA Signal Analyzer specifications guide.

Option RTS

Real-time I/Q data streaming ¹			
Output stream resolution		16-bit I + jQ	
IQ streaming bandwidth		Up to 255 MHz	
Electrical interface		LVDS	
Sample rate		Varies continuously based on RTSA span setting	
Max IQ streaming bandwidth and sample rate	B1X	160 MHz	200 Msamples/s
	B2X or B5X	255 MHz	300 Msamples/s
Supported data recorder		X-COM Systems IQC5255B	
Capture time		< 3 hours at 255 MHz bandwidth	
Data tagging		Event markers, IRIG-B GPS	

1. Use with X-COM Systems IQC5255B data recorder to capture rare events and play back at RF using integrated control software on the PXA.

Related Literature

Keysight PXA signal analyzers


Publication title	Publication number
X-Series Signal Analyzers - Brochure	5992-1316EN
N9030B PXA X-Series Signal Analyzer, Multi-touch - Configuration Guide	5992-1318EN

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R-55B-001-2	KeysightCare Enhanced – Extend to 2 years
R-55B-001-3	KeysightCare Enhanced – Extend to 3 years (Recommended)
R-55B-001-5	KeysightCare Enhanced – Extend to 5 years (Recommended)
KeysightCare Assured	Includes Tech Support and Warranty
R-55A-001-2	KeysightCare Assured – Extend to 2 years
R-55A-001-3	KeysightCare Assured – Extend to 3 years
R-55A-001-5	KeysightCare Assured – Extend to 5 years
Start-Up Assistance	
PS-S10	Included – instrument fundamentals and operations starter
PS-S20	Optional, technology & measurement science standard learning

1. Available in select countries. For details, please view the [datasheet](#). R-55B-001-2/3/5 must be ordered with R-55B-001-1.

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