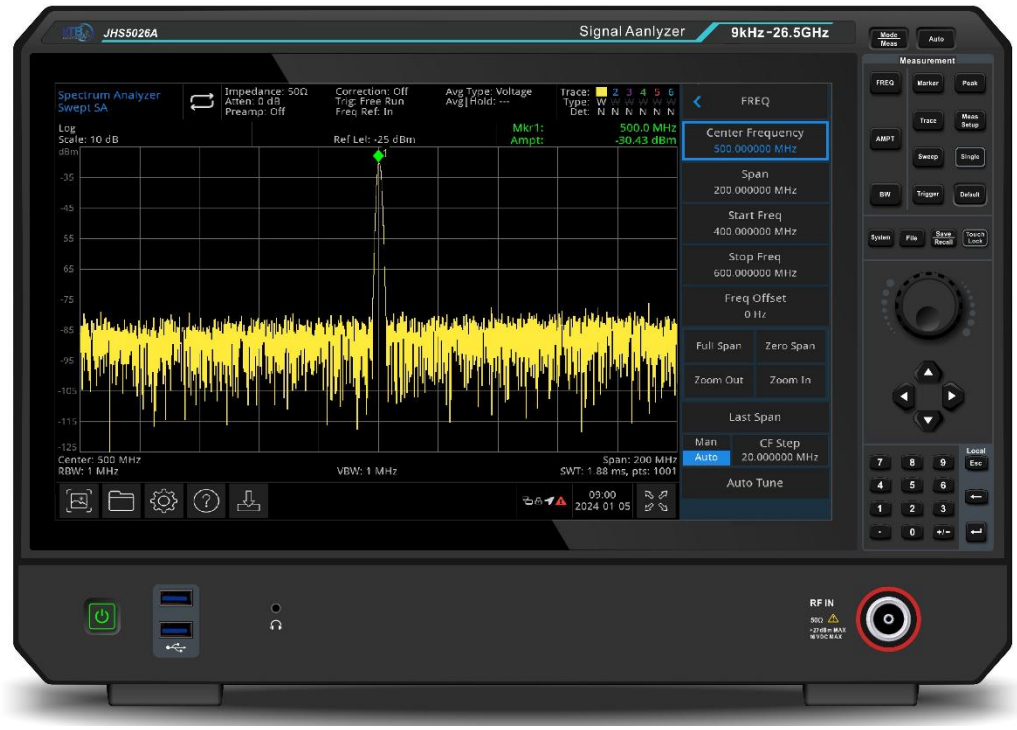
JHS5000A Series Signal Analyzer

Data Sheet

Product Features

- Frequency range: 9 kHz to 26.5 GHz (maximum)
- Displayed Average Noise Level (DANL): down to -163 dBm (typical value)
- Phase noise: < -107 dBc/Hz (at 10 kHz offset, typical value)
- Maximum number of scan points: 100,001
- Minimum Resolution Bandwidth (RBW): 1 Hz
- Support for advanced one-click measurement (optional)
- Support for EMI pre-scan analysis function (optional)
- Support for analog demodulation analysis (optional)
- Support for vector signal analysis (optional)
- Support for real-time spectrum analysis (optional)
- Support for I/Q analysis (optional)
- Equipped with a 15.6-inch 1920×1080 high-definition capacitive touch TFT LCD screen
- Rich peripheral interfaces: support for keyboard, mouse, storage, upper computer, remote control, Web control, multi-device synchronization, demonstration monitoring, audio buzzer, etc.



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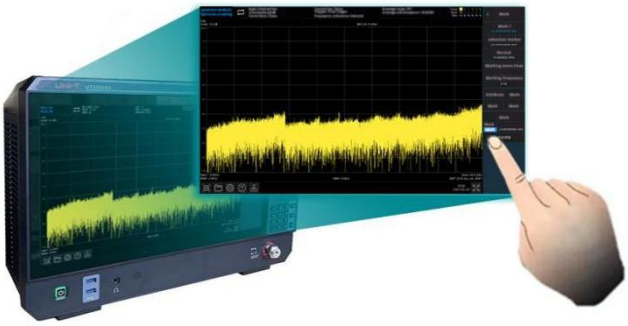
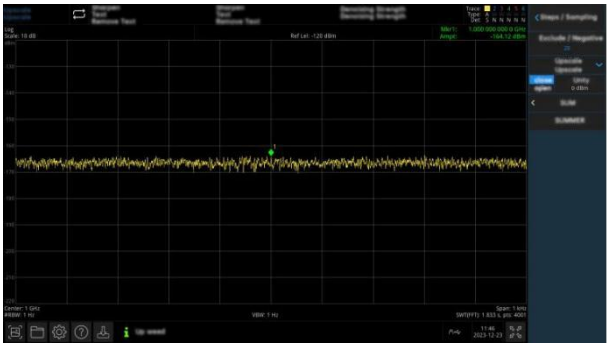


Multi-touch FHD Screen for Quick Operation

The 15.6-inch multi-touch FHD capacitive screen enables fast menu configuration, and supports various gesture operations on traces including dragging, expanding and zooming. This user-friendly human-machine interaction effectively simplifies complicated operation procedures.

Excellent Sensitivity for Detecting Weaker Signals

The measurement of weak signals is susceptible to the internal noise floor of the spectrum analyzer. The JHS5000A Series features a Displayed Average Noise Level as low as-163dBm, and its excellent sensitivity enables effective detection of weak signals.



Removable Dust Filter

The instrument features a detachable dust filter, allowing users to manually clean the air intake after prolonged operation. This design ensures the overall reliability of the instrument and prevents short circuits, burnout, or fire hazards caused by dust accumulation.

Analog Demodulation

It provides demodulation and analysis for AM and FM modulated signals.

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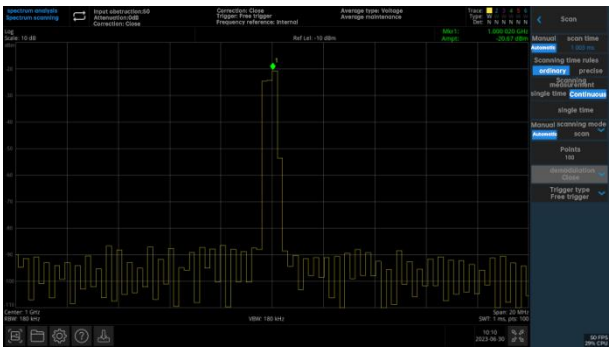
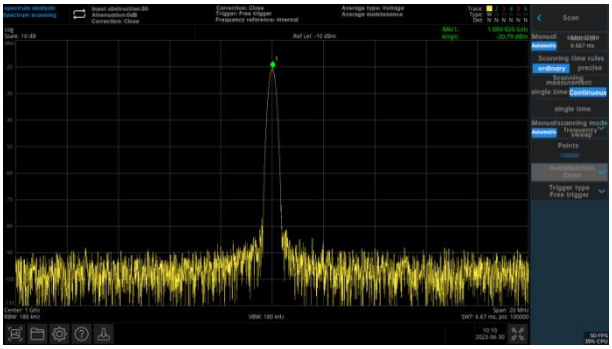
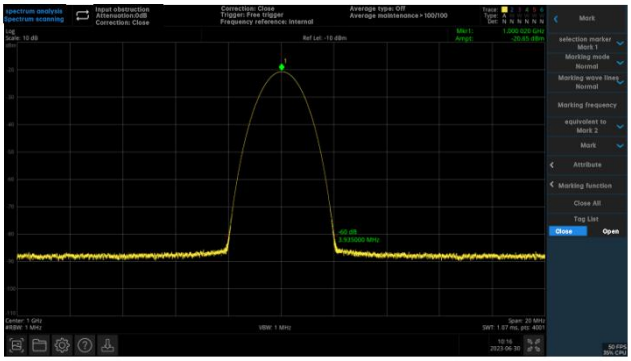
100,001 Scan Points

The JHS5000A Series supports a maximum of 100,001 scan points, delivering higher frequency resolution and making it easier to capture elusive signals.





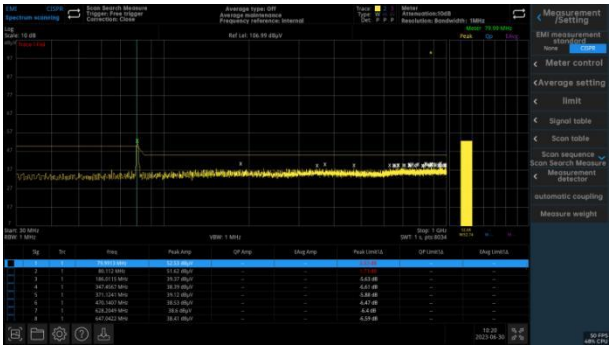


Excellent selectivity

It delivers superior capability to distinguish adjacent signals with unequal amplitudes.

EMI Pre-compliance and Compliance Testing

Early completion of electromagnetic interference (EMI) performance testing helps avoid product launch delays. To ensure successful final EMI compliance testing, pre-compliance testing should be performed during the product development phase. Identifying EMI issues early in the design cycle allows for internal conduction and radiated emission testing, thereby shortening the overall testing cycle.



Definitions and Conditions

"The Technical Specifications" provide a detailed description of the parametric performance covered by the product warranty. Unless otherwise specified, these specifications apply to the temperature range of 20℃ to 30℃.

"Typical Values" refer to additional product performance data that are not covered by the product warranty. When the performance exceeds the technical specifications, 80% of units can achieve a confidence level of 95% within the temperature range of 20℃ to 30℃. Typical performance does not include measurement uncertainty.

"Normal Value" refers to expected performance or product characteristics that are useful in product applications but not included in the product warranty.

The analyzer will meet its technical specifications under the following conditions:

The analyzer must be in the calibration cycle and preheated for at least 30 minutes. If the analyzer has been stored in an environment within the permitted storage temperature range but outside the permitted operating temperature range, it must be placed in the permitted operating temperature range for at least two hours before startup.

Product Features and Model Correspondence Table

	JHS5013A	JHS5026A
Spectrum Analysis	●	●
Vector Signal Analysis	○	○
EMI	○	○
Analog Demodulation	○	○
Advanced Measurement	○	○
I/Q Analysis	○	○
Real-Time Spectrum Analysis	○	○

Note: ● indicates standard, ○ indicates optional, and × indicates unsupported.

Frequency and Time Technical Specifications

Frequency		
Model	JHS5013A	JHS5026A
Frequency Range	9kHz to 13.6GHz	9kHz to 26.5GHz
Frequency Band	Local Oscillator Multiplication (N)	
0	1	100kHz to 3.05GHz
1	2	2.95GHz to 7.55GHz
2	2	7.45GHz to 9.25GHz
3	2	9.15GHz to 11.05GHz
4	2	10.95GHz To 12.75GHz
5	4	12.65GHz To 14.55GHz
6	4	14.45GHz To 16.55GHz
7	4	16.45GHz To 18.55GHz
8	4	18.45GHz To 20.55GHz
9	4	20.45GHz To 24.55GHz
10	4	24.45GHz To 26.5GHz

10MHz Internal Frequency Reference		
Reference Frequency	10.000000MHz	
Reference Frequency Accuracy	± [(Time Since Last Calibration × Frequency Aging Degree) + Temperature Stability + Initial Accuracy]	
Temperature Stability	20 to 30°C	±3×10-8
	Full Temperature Range	±3×10-8
Frequency Aging Rate	±3×10-7/year (First Year)	
Achievable Initial Calibration Accuracy	$\pm 8\times10^{-8}$	
Sampling Frequency Reference Accuracy	±(3×10-7+3×10-8+8×10-8)	
1 Year After Last Calibration	$\pm 4.1\times10^{-7}$	
Residual FM	Nominal Value for p-p ≤1Hz Within 20ms	

Frequency Readings (Start, Stop, Center, Cursor)	
Cursor Resolution	Scan width / (Scan points-1)
Cursor Frequency Reading Accuracy	±[Cursor Frequency Reading × Reference Frequency Accuracy + 0.25% × Scan Width + 5% × Resolution Bandwidth + Cursor Frequency Resolution + 0.5 × Horizontal Resolution]
Cursor Mode	Normal, Delta, Fixed
Cursor Function	Noise Cursor, In-Band Power, In-Band Density, n Db, Frequency Meter
Frequency Counter Resolution	0.001 Hz

Frequency Counter Uncertainty	± [Cursor Frequency Reading × Reference Frequency Accuracy + Frequency Counter Resolution]	
ΔCounter Accuracy	±[δ Frequency Reading × Reference Frequency Accuracy + 0.141hz]	
Frequency Span (FFT and Scan Modes)		
Scan Range	0Hz (Zero Span), 10Hz to 13.6GHz	0Hz (Zero Span), 10Hz to 26.5GHz
Horizontal Resolution	Scan Width / (Scan Points-1)	
Accuracy	Scan Mode	± [0.25% × Span + Horizontal Resolution]
	FFT Mode	± [0.10% × Span + Horizontal Resolution]
Scan Time and Trigger		
Scan Time Range	Scan Width = 0Hz	1μs to 6000s
	Scan Width ≥10Hz	1ms to 4000s
Scan Time Accuracy	Scan Width ≥10Hz, Scan Mode	±0.01% Nominal Value
	FFT with Scan Width ≥10Hz	±40% of the Nominal Value
	Scan width =0Hz	±1% Nominal Value
Scan/Measure	Continuous, Single Shot	
Trigger Source	Free Run Trigger, Video Trigger, External Trigger 1, External Trigger 2, Periodic Timer	
Trigger Delay	Span = 0 Hz, FFT	-150ms to +500ms
	Span ≥10Hz, Scan Mode	1μs to +500ms
	Resolution Ratio	0.1μs
Resolution Bandwidth (RBW)		
Range (-3 dB Bandwidth)	1 Hz to 3MHz (10% step), 4, 5, 6, 8MHz	
Resolution Filter Shape Factor	<4.1:1 (nominal value)	-60dB:-3dB
Bandwidth Accuracy (Power)	1Hz to 750kHz	±1.0%(±0.044dB Nominal Value)
	820kHz to 1.2MHz	±2.0%(±0.088dB Nominal Value)
	1.3MHz to 2.0MHz	±0.13dB Nominal Value
	2.2MHz to 3.0MHz	±0.22dB Nominal Value
	4.0MHz to 8.0MHz	±0.32dB Nominal Value
Bandwidth Accuracy (-3.01dB) (Scan Time Rule = Accurate)	1Hz to 1.3MHz	±2.0% Nominal Value
	1.5MHz to 3.0MHz	±7.0% Nominal Value
	4MHz to 8MHz	±15% of the Nominal Value
Video Bandwidth (VBW)		
Scope	1Hz to 3MHz (10% Step), 4, 5, 6, 8MHz	
Video Bandwidth Uncertainty	±6.0% of the Nominal Value	
Scan (Trajectory) Point Range		

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Scan All Width	11 to 100001

Amplitude Technical Indicator

Amplitude Range		
Range	Display Average Noise Level (DANL) up to +27dBm	
Input Attenuation	0 to 50 dB, 2 dB Increments	
Reference Level		
Logarithmic Scale	Step from-170dBm to +30dBm,0.01dB	
Linear Scale	Same as Logarithmic (707pV to 7.07V)	
Accuracy	0dB	
Preamplifier		
Frequency Range	100kHz to 7.5GHz (Low Frequency Band)	
	100kHz to 26.5GHz (Full Frequency Band)	
Noise Figure	10MHz to 26.5GHz	Displayed Average Noise Level (DANL) +174dBm Nominal Value
Maximum Safe Input Level		
Total Average Power	+27dBm(0.5W)	Input Attenuation ≥10dB, preamplifier off
	+27dBm(0.5W)	Input Attenuation ≥20dB, preamplifier on
Peak Pulse Power	+47dBm(50W)	<10μs pulse width, <1% Duty Cycle, and Input Attenuation ≥30dB
DC Voltage	AC Coupling	+16VDC
Display Range		
Logarithmic Scale	0.1 to 1dB per Grid, with 0.1 as the Step	
	1 to 20dB per Grid, with 1dB Increments (10 Display Grids)	
Linear Scale	10 cells	
Scale Unit	dBm、dBmV、dBμV、V、W	
Display Scale Switching Uncertainty		
Switching Between Linear Scale and Logarithmic Scales	0dB	
Logarithmic Scale	0dB	
Display Scale Fidelity		
-80dBm ≤ Input Mixer Level <-10dBm		Total Value ±0.15dB
Trace Detector		
Normal Detection, Peak, Negative Peak, Sampling, Logarithmic Power Average, Rms Average, Voltage Average		
Trace Function		
Refresh, Trace Average, Maximum Hold, Minimum Hold		

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Frequency Response			
20 °C to 30 °C, 30% to 70% Relative Humidity, 10 dB Input Attenuation, Relative to 50 MHz, σ = Nominal Standard Deviation			
		Technical Specifications	95%(≈2σ)
Preamplifier Off	9kHz to 10MHz	±0.50dB	±0.40dB
	10MHz to 3GHz	±0.65dB	±0.50dB
	3GHz to 13.6GHz	±1.30dB	±0.80dB
	13.6GHz To 19.3GHz	±1.50dB	±1.00dB
	19.3GHz To 24.2GHz	±2.20dB	±1.30dB
	24.2GHz To 26.5GHz	±2.50dB	±1.40dB
Preamplifier On	100kHz to 10MHz	±0.60dB	±0.50dB
	10MHz to 3GHz	±1.10dB	±1.00dB
	3GHz to 7.5GHz	±1.40dB	±1.20dB
	7.5GHz to 13.6GHz	±1.20dB	±1.00dB
	13.6GHz To 21GHz	±1.40dB	±1.20dB
	21GHz to 24.2GHz	±2.00dB	±1.80dB
	24.2GHz To 26.5GHz	±2.80dB	±2.40dB
Input Attenuation Switching Uncertainty			
		Technical Specifications	Other Information
Preamplifier Off	50MHz (Reference Frequency)	±0.30dB	± 0.15dB Typical Value
Relative to 10dB (Reference Setting)	100kHz to 3.0GHz		± 0.30dB Nominal Value
	3.0GHz to 7.5GHz		± 0.50dB Nominal Value
	7.5GHz to 26.5GHz		± 0.70dB Nominal Value
Total Absolute Magnitude Accuracy			
(10db Attenuation, 20-30°c, 1hz≤Rbw≤1mhz, Input Signal Range-10 To-50dbm. All Settings Are Auto-Coupled With Arbitrary Reference Levels And Scales, Except Auto Swp Time (Auto Scan Time) =Accy (Accuracy).)			
50MHz	±0.40dB		
All Frequencies	±(0.40dB + Frequency Response)		
Preamplifier On	±(0.36dB + Frequency Response) (95%)		
Input Voltage Standing Wave Ratio (Vswr) (0db Attenuation)			
10MHz to 26.5GHz	<2.4 Nominal Value		
Uncertainty Of Resolution Bandwidth Conversion (Rbw) With 30khz As The Reference			
RBW 1Hz to 3MHz	±0.15dB		
RBW 4、5、6、8MHz	±1.0dB		

Dynamic Range Technical Specifications

1db Gain Compression (Dual Audio)		
		Total power input to the mixer
Preamplifier Off	10MHz to 7.5GHz	+6dBm Nominal Value
	7.5GHz to 13.5GHz	+4dBm Nominal Value
	13.5GHz To 26.5GHz	+2dBm Nominal Value
Preamplifier On	10MHz to 7.5GHz	-15dBm Nominal Value
	7.5GHz to 26.5GHz	-19dBm Nominal Value

Display Average Noise Level (Danl)

The input terminal is connected to a 50Ω load, equipped with a sample-and-average detector. The average type is Log, with 0dB input attenuation, 1Hz RBW, and a temperature range of 20°C to 30°C.

	Preamplifier Off	Preamplifier On
100kHz to 1MHz	-125dBm Typical Value	---
1MHz to 20MHz	-130dBm, -135dBm Typical Values	-154dBm, -158dBm Typical Values
20MHz to 1.5GHz	-145dBm, -150dBm Typical Values	-160dBm, -163dBm Typical Values
1.5GHz to 4.5GHz	-144dBm, -149dBm Typical Values	-160dBm, -163dBm Typical Values
4.5GHz to 7.6GHz	-140dBm, -145dBm Typical Values	-156dBm, -161dBm Typical Values
7.6GHz to 9.5GHz	-141dBm, -147dBm Typical Values	-158dBm, -160dBm Typical Values
9.5GHz to 13GHz	-136dBm, -140dBm Typical Values	-156dBm, -160dBm Typical Values
13GHz to 14.5GHz	-141dBm, -145dBm Typical Values	-156dBm, -161dBm Typical Values
14.5GHz To 19.3GHz	-132dBm, -138dBm Typical Values	-153dBm, -157dBm Typical Values
19.3GHz To 23GHz	-134dBm, -139dBm Typical Values	-152dBm, -157dBm Typical Values
23GHz to 24GHz	-132dBm, -137dBm Typical Values	-150dBm, -155dBm Typical Values
24GHz to 26.5GHz	-128dBm, -133dBm Typical Values	-144dBm, -149dBm Typical Values

Spurious Response

Residual Response (Input Connected To 50ω Load With 0db Attenuation)	200kHz to 26.5GHz (Scan Mode)			-90dBm
	Zero Scan Width or FFT or Other Frequency			-100dBm Nominal Value
Mirror Response (First-Order Mixer)	Tuned Frequency (f)	Mixer Level		Rspond
	10MHz to 26.5GHz	-10dBm		-70dBc, -80dBc Typical Values
Mirror Response	Tuned Frequency (f)	Pumping Frequency	Mixer Level	Respond
	10MHz to 20.5GHz	f+1470MHz	-10dBm	-70dBc, -80dBc Typical Values
	20.5GH To 26.5GHz	f-1470MHz	-10dBm	-70dBc, -80dBc Typical Values
LO-Related Spurious Signals	10MHz to 26.5GHz	---	-10dBm	-64dB Typical Value

other stray response		
	Mixer Level	Respond
Intermediate Frequency Feed-Through	-10dBm	-75dBc, -80dBc Typical Values
First-Order Radio Frequency (f≥ 10mhz Off The Carrier Frequency)	-10dBm	-70dBc, -80dBc Nominal Values
Higher-Order Rf (f≥10mhz Off The Carrier Frequency)	-10dBm	-70dBc, -80dBc Nominal Values
Second Harmonic Distortion		
Frequency Of Signal Source	SHI （ Nominal Value ）	
10MHz to 3.75GHz	+45dBm	
3.75GHz to 13.25GHz	+62dBm	
Third Order Intermodulation Distortion		
Preamplifier Off (Mixer Input: -20dbm, 100khz Frequency Interval Dual-Tone Signal, 0db Attenuation, Operating At 20°c To 30°c)	10MHz to 2GHz	+12dBm, +16dBm Typical Values
	2GHz to 3GHz	+12dBm, +17dBm Typical Values
	3GHz to 7.5GHz	+12dBm, +16dBm Typical Values
	7.5GHz to 13.6GHz	+11dBm, +15dBm Typical Values
	13.6GHz to 26.5GHz	+8dBm, +12dBm Typical Values
Preamplifier On (Mixer Input: -45dbm, 100khz Frequency Interval Dual-Tone Signal, 0db Attenuation, Operating At 20°c To 30°c)	10MHz to 26.5GHz	-8dBm Nominal Value

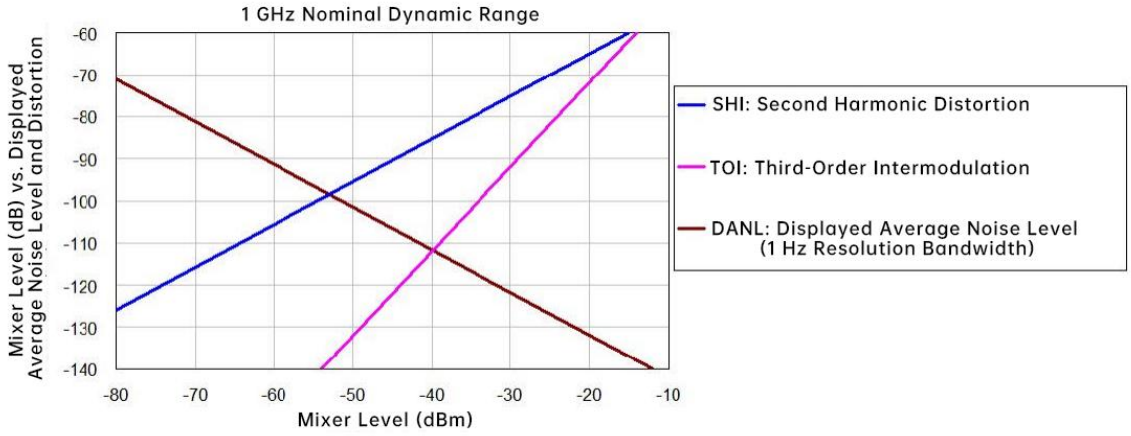

Figure 1.0 shows the Nominal Dynamic Range, Second-Order and Third-Order Distortion, and Frequency Range from 10mhz To 3ghz

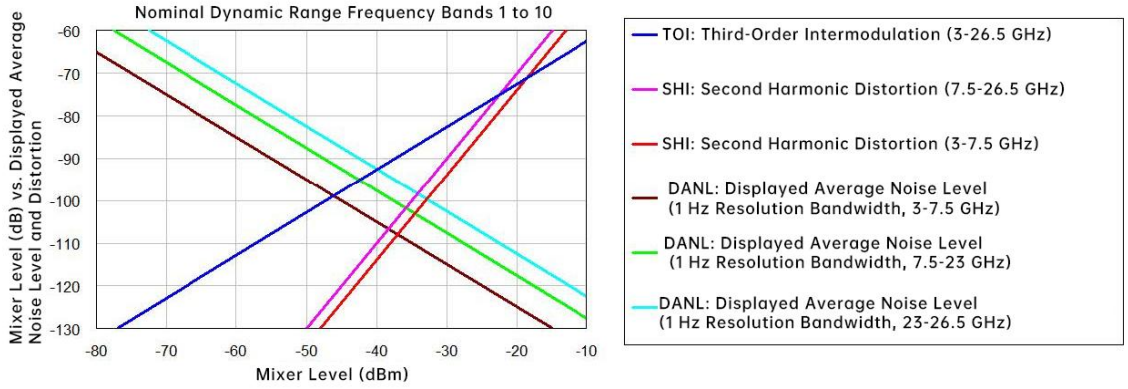

Figure 2. Nominal dynamic range-2nd and 3rd order distortion, 3GHz to 26.5GHz

Phase Noise	Frequency Deviation	Indicator	Typical Value
Noise Sideband (20℃ to 30℃, CF=1GHz)	100Hz	---	-80dBc/Hz Nominal Value
	1kHz	-100dBc/Hz	-102dBc/Hz
	10kHz	-106dBc/Hz	-107dBc/Hz
	100kHz	-108dBc/Hz	-110dBc/Hz
	1MHz	-130dBc/Hz	-132dBc/Hz

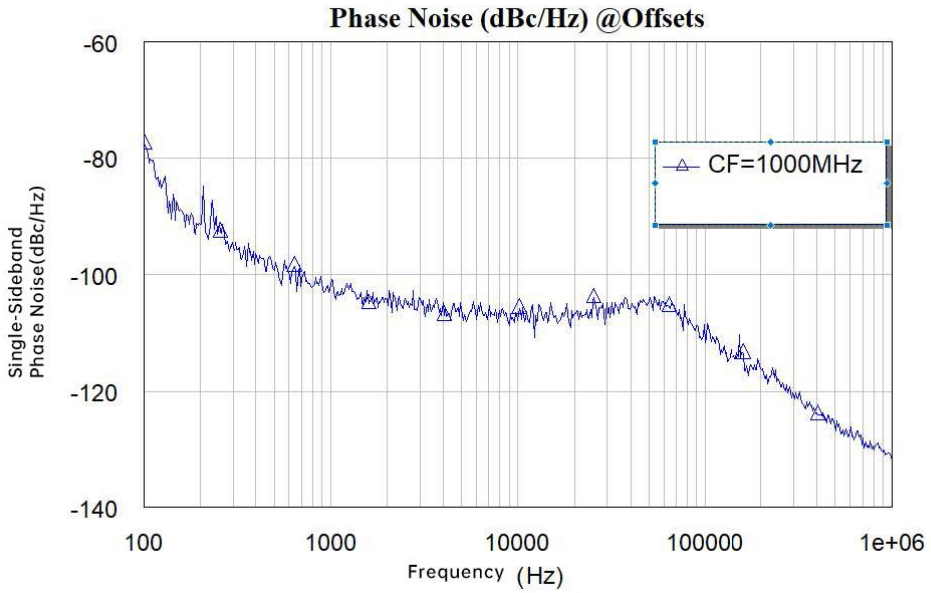

Figure 3. Nominal Phase Noise at 1GHz Center Frequency

Advanced Measurement (Optional)

Power Measurement	
Channel Power	Channel Power, Power Integral Density
Time Domain Power	Zero Span Time-Integrated Power
Occupied Bandwidth	Occupied Power, Transmission Frequency Error
Adjacent Channel Power	Main Channel Power, Left Adjacent Channel Power/Power Ratio, Right Adjacent Channel Power/Power Ratio
Carrier-To-Noise Ratio	Carrier Power, Noise Power
Nonlinear Measurement	
Third-Order Intercept	Automatic Search Based on Dual-Tone Peak
Harmonic Analysis	Maximum Harmonic Number: 10
Spectrum Monitoring	
Waterfall Chart	

Simulated Demodulation Analysis (Optional)

General Parameters		
Carrier Frequency	2MHz to 13.6GHz	2MHz to 26.5GHz
Carrier Power Accuracy	±2dB, Nominal Value	
Interiorinput Power	-30dB to +20dBm	Automatic Attenuation
AM measure		
Modularity	20Hz to 100kHz	
Accuracy	1Hz (Nominal)	Modulation Rate <1kHz
	<0.1% Modulation Rate (Nominal)	Modulation Rate ⩾1kHz
Degree of Depth	5 to 95%	
Accuracy	±4% of the Nominal Value	
FM Measure		
Modularity	20Hz to 100kHz	
Accuracy	1Hz (Nominal)	Modulation Rate <1kHz
	<0.1% Modulation Rate (Nominal)	Modulation Rate ⩾1kHz
Frequency Deviation	1kHz to 400kHz	
Accuracy	±4% (Nominal Value)	

Vector Signal Analysis (Optional)

General Parameters		
Carrier Frequency	2MHz to 13.6GHz	2MHz to 26.5GHz
Carrier Power Accuracy	±2dB, Nominal Value	
Carrier Power Range	-30dBm to +20dBm, Nominal Value	
MEASUREMENT FUNCTION		
Modulation Type	ASK(2ASK);	
	FSK: 2FSK,4FSK,8FSK,16FSK	
	MSK(GMSK)	
	PSK: BPSK,QPSK,OQPSK,8PSK	
	DPSK: DBPSK,DQPSK,D8PSK,π/4 -DQPSK,π/8 -D8PSK;	
	QAM: 16,32,64,128,256	
Measure Symbol Length	16 to 4096	
Symbol Points/Oversampling Rate	4,6,8,10,12,14,16	
Symbol Rate	From 1 kps to 32 Msps, the symbol rate multiplied by the symbol count must be less than or equal to 150 Msps, meaning the product of the symbol rate and symbol count should not exceed the current actual sampling rate.	
Trigger Depression	500ms	
Filter		
Filter Type	Rise Cosine/Nyquist, Root Rise Cosine/Root Nyquist, Gaussian, Half Sine, Rectangle	
Filter Length	2 to 128	
Alpha/BT	Alpha 0.01 to 1, BT 0.01 to 10	
Display		
Data	IQ measurement in the time domain, IQ measurement in the frequency domain	
	IQ reference in time domain, IQ reference in frequency domain	
	Symbol error statistics table, time-domain error vector, frequency-domain error vector	
	Time domain, frequency domain, IQ amplitude error, IQ phase error	
Window Layout	1,2,3,4	
Form	Logarithmic amplitude, Linear amplitude, Real part, Imaginary part	
	IQ diagram, constellation diagram, I eye diagram, Q eye diagram	
	Phase diagram, phase expansion diagram, phase tree diagram	
Symbol Error Statistics Table		
PSK/DPSK/MSK/QAM	EVM (rms EVM,peak EVM),Magnitude error	
	Phase error,IQ offset,Carrier offset,SNR Quadrature error	
	Gain imbalance(not support for MSK)	

ASK	ASK Error,ASK depth,carrier offset
FSK	FSK Error,Magnitude error,FSK deviation,carrier offset

I/Q Analysis (Optional)

Frequency			
Frequency Scan Width	Standard Parts	9kHz to 25MHz	
	Option B40	9kHz to 40MHz	
Resolution Bandwidth (Spectral Measurement)			
Scope	Whole	100 MHz to 3MHz	
	Scan width 1MHz	50Hz to 1MHz	
	Scan width 10kHz	1Hz to 10kHz	
	Scan width 100Hz	100 MHz to 100Hz	
Window shape	Flat-topped, Uniform, Hanning, Gaussian, Blackman, Blackman-Harris, and Kaiser Bessel (K-B 70dB, K-B 90dB, and K-B 110dB)		
Analytical Bandwidth			
Standard parts	9kHz to 25MHz		
Option B40	9kHz to 40MHz		
IF Frequency Response (Standard 10MHz IF path) **Intermediate Frequency Response (Including Demodulation and FFT Responses at 20°C to 30°C)**			
Center Frequency (GHz)	Scan Width (MHz)	Maximum Change	RMS（Nominal Value）
≤3.0	≤10	±0.4dB	0.03dB
3.0 < f≤26.5	≤10		0.10dB
Intermediate Frequency Phase Linearity (Nominal Average Phase Linearity Deviation)			
Center Frequency (GHz)	Scan Width (MHz)	Peak-to-Peak Value	RMS（Nominal Value）
≤3.0	≤10	0.5°	0.2°
3.0 < f≤7.5	≤10	0.5°	0.4°
7.5 < f≤26.5	≤10	0.5°	0.4°
Data Acquisition (Standard 10mhz Intermediate Frequency Path) Time Record Length			
IQ Analyser	4,000,000 IQ Samples		
Sampling Rate	90MSa/s		
ADC Resolution Ratio	14-Bit		

Data Acquisition (b40 Intermediate Frequency Path) Time Record Length	
IQ Analyser	4,000,000 IQ Samples

Sampling Rate	90MSa/s
ADC Resolution Ratio	14-Bit

Real-Time Spectrum Analysis (Optional)

Frequency And Time Accuracy						
Real-Time Analysis Bandwidth	25MHz					
	40MHz					
Full-range accuracy, Minimum Signal Duration at 100% POI	Maximum Scan Width, Default Window Kaiser					
	7.45μs					
Detector Mode	Positive Peak, Negative Peak, Sample, Average					
Number Of Traces	6					
Window Type	Hanning, Blackman Harris, Rectangular, Flat-Topped, Caesar, Gaussian					
Resolution Bandwidth	Provide 6 RBWs for each window, except rectangular windows.					
	Caesar Window					
	SCAN WIDTH	Minimum Bandwidth	Maximum Bandwidth			
	40MHz	100kHz	3.21MHz			
	25MHz	62,8kHz	2.01MHz			
	10MHz	25.1kHz	804kHz			
	1MHz	2.51kHz	80.4kHz			
	100kHz	251Hz	8.04kHz			
Maximum Sampling Rate	51.2Msa/s					
FFT Speed	146,484/s (Nominal Value)					
Cursor Count	10					
Amplitude Resolution	0.01dB					
Frequency Point	801					
Acquisition Time	Maximum Sampling Rate> 156.5 μs					
Minimum Signal Duration At 100%Poi						
	Duration （μs）					
Scan Width	RBW1	RBW2	RBW3	RBW4	RBW5	RBW6
40MHz	26.9	16.9	11.9	9.32	8.07	7.45
25MHz	38.9	22.9	14.9	10.9	8.82	7.82
10MHz	86.8	46.8	26.8	16.8	11.8	9.30
1MHz	807	407	207	107	56.3	31.3
Range						

Amplitude Flatness (Conventional Spectrum)	±0.5dB (Nominal Value)
SFDR	<-60dBc (Typical Value)
Probability Density Display	
Probability Range	0 to 100% (step 0.1%)
Minimum Scan Width	5kHz
Duration	32ms to 10s
Spectrogram	
Maximum Acquisition	8,192
Dynamic Range Of Color Coverage	200dB
PVT	
Minimum Capture Time	187.9μs
Maximum Capture Time	40s
Detonate By Contact	
Trigger Source	Free, External Trigger 1, External Trigger 2, Mid-frequency Power (Time Domain), Frequency Mask
Frequency Mode Trigger	
Trigger View	Density, Spectrum, Conventional, Power Time
Trigger Resolution	0.5dB (nominal value)
Trigger Condition	Enter, Exit, Inside, Outside, Enter→Exit, Exit→Enter

Interface and Display

General-Purpose Interface	
Front RF Input	NMD 2.92 Positive Head
10mhz Reference Input	10 MHz, -5 dBm to +10 dBm, 50 Ω, BNC Connector
10mhz Reference Output	10 MHz,>0 dBm, 50 Ω, BNC Connector
External Trigger Input	TTL, BNC type
HDMI Display	HDMI 1.4 Display Interface
USB-Host	Front panel: USB-A 3.0, rear panel: USB-A 2.0
USB-Device	USB-B 2.0
LAN	LAN(VXI11),10/100/1000 Base,RJ-45
Display Screen	
Display Type	15.6-inch HD Capacitive Touch Screen
Display Resolution	1920×1080

General Technical Specifications

Specifications		
Supply Voltage	100 to 240VAC (Fluctuation: ±10%)	100 to 120VAC (Fluctuation: ±10%)
Frequency	50/60Hz	400Hz
Environment		
Temperature Range	Operation: 0℃ ~ +40℃	
	Non-Operational: -20℃ to +70℃	
Cooling Means	Forced Cooling By Fan	
Humidity Range	Operation: Below +35℃, Relative Humidity ≤90%; Non-Operation: +35℃ ~ +40℃, Relative Humidity ≤60%	
Above Sea Level	Operational: Below 3000 Meters; Non-Operational: Below 15,000 Meters	
Class Of Pollution	2	
Service Environment	Indoor Use	
Rating Of Machine		
Size	445mm × 311mm × 195mm (width × height × depth)	
Weight	About 11kg	
Adjustment Interval	The recommended calibration interval is one year.	
Regulatory Standards		
Electromagnetic Compatibility	Complies with the EMC Directive (2014/30/EU), and meets or exceeds the standards of IEC 61326-1:2021/EN61326-1:2021 and IEC 61326-2-1:2021/EN61326-2-1:2021.	
Conducted Disturbance	CISPR 11/EN 55011	CLASS B group 1,150kHz-30MHz
Radiated Disturbance	CISPR 11/EN 55011	CLASS B group 1,30MHz-1GHz
Electrostatic Discharge	IEC 61000-4-2/EN 61000-4-2	4.0 kV (Contact), 8.0 kV (Air)
Radio Frequency Electromagnetic Field Immunity	IEC 61000-4-3/EN 61000-4-3	0V/m(80 MHz to 1 GHz); 3V/m(1.4 GHz to 2 GHz); 1V/m(2.0 GHz to 2.7GHz)
electric fast transient Burst	IEC 61000-4-4/EN 61000-4-4	2kV (AC Input Port)
Surge	IEC 61000-4-5/EN 61000-4-5	1kV (Hot Wire To Neutral Wire) 2kV (Hot/Neutral To Ground)
Continuous RF Conducted Immunity	IEC 61000-4-6/EN 61000-4-6	3V,0.15-80MHz
Voltage Dips and Short Interruptions	IEC 61000-4-11/EN 61000-4-11	Voltage Dip ： 0% UT During 1 cycle; 40% UT During 10/12 cycles; 70% UT During 25/30 cycles Short Interruption: 0% UT during 250/300 cycles

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Safe Code	
	EN 61010-1:2010+A1:2019 EN IEC61010-2-030:2021+A11:2021 BS EN61010-1:2010+A1:2019 BS EN IEC61010-2-030:2021+A11:2021 UL 61010-1:2012 Ed.3+ R:19 Jul2019 UL 61010-2-030:2018 Ed.2 CSA C22.2#61010-1:2012 Ed.3+u1;u2;A1 CSA C22.2#61010-2-030:2018 Ed.2

Accessories, Options and Warranty Period

	Description	Ordering Part Number
Model	Signal Analyzer, 9 kHz to 13.6 GHz	JHS5013A
	Signal Analyzer, 9 kHz to 26.5 GHz	JHS5026A
Standard Accessories	Power Cord Compliant With Local Standards x1	
	USB cable x1	
Optional Attachments		
Software	Advanced Measurement	JHS5000A-AMK
	EMI Measure	JHS5000A-EMI
	Simulated Demodulation Analysis	JHS5000A-AMA
	Vector Signal Analysis	JHS5000A-VSA
	I/Q Analysis	JHS5000A-I/Q
	real-time spectrum analysis	JHS5000A-RTSA

Note: All main units, accessories and options shall be ordered from KTB.

Warranty Period
The main unit is warranted for one year, excluding cables and accessories.