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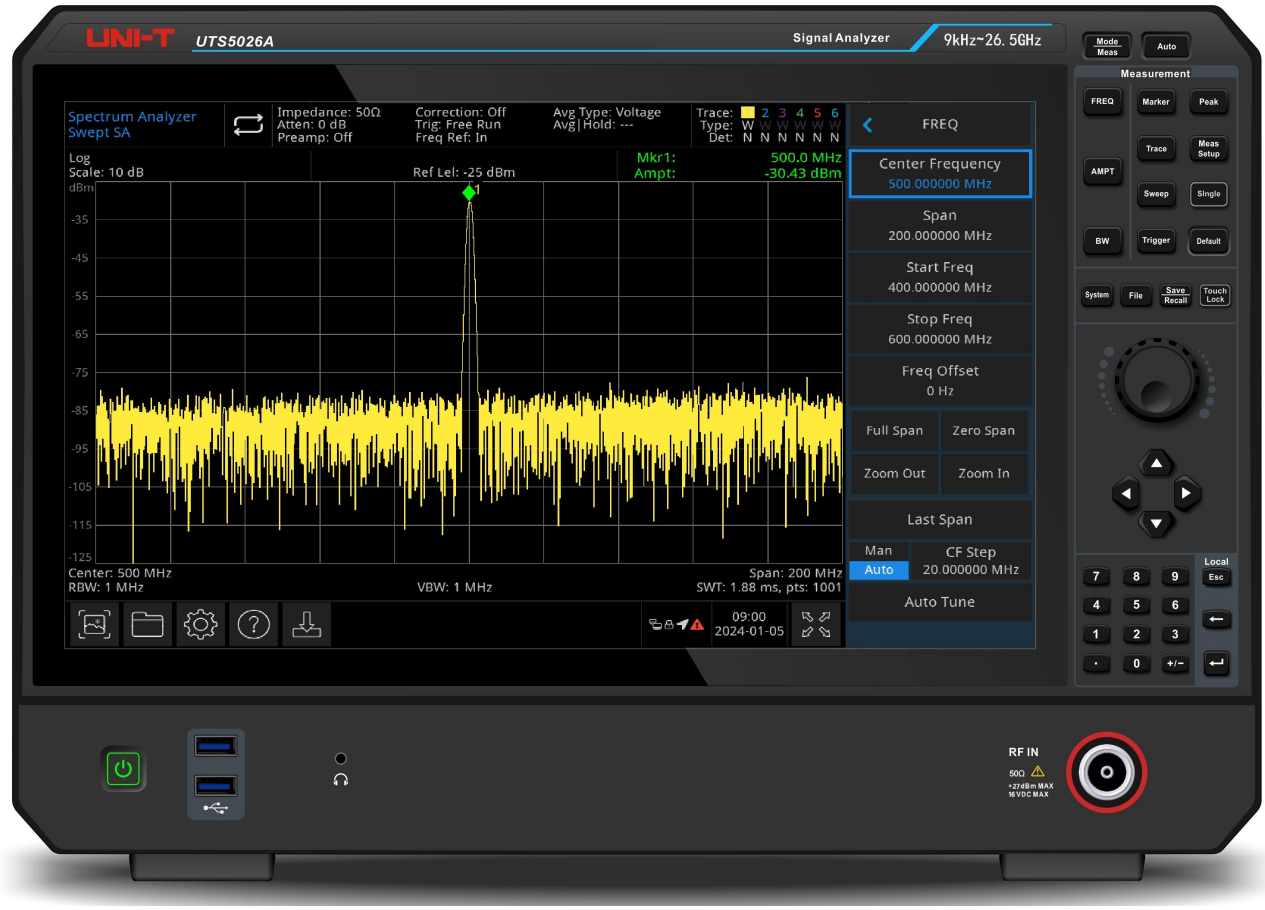


Data Sheet

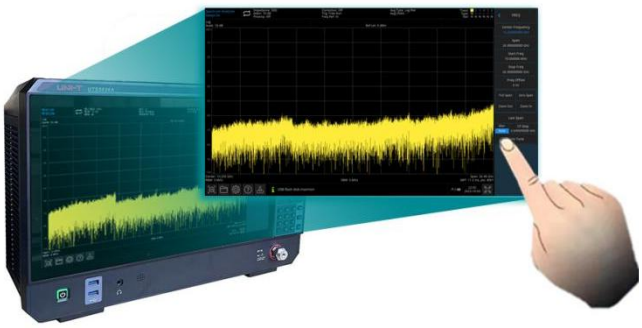
UTS5000A Series Signal Analyzer

REV 0

2023.12

Product Features

- Frequency measurement range: 9 kHz ~ 13.6 GHz,9 kHz ~ 26.5 GHz
- Display average noise level can be as low as -163 dBm (typical)
- Phase noise <-107 dBc/Hz (offset 10 kHz, typical)
- Scanning points up to 100001 scanning points
- Minimum resolution of bandwidth (RBW) is 1 Hz
- Advanced function one-key measurement (option)
- EMI analysis function (optional)
- Analog demodulation analyzer (optional)
- Vector signal analysis (optional)
- Real-time spectrum analyzer (optional)
- I/Q analyzer (optional)
- 15.6 inch 1920 x 1080 HD thin film transistor LCD display screen
- Interface： keyboard, mouse, storage, upper computer, remote control, web control, multi-device synchronization, demonstration monitoring, audio buzzer

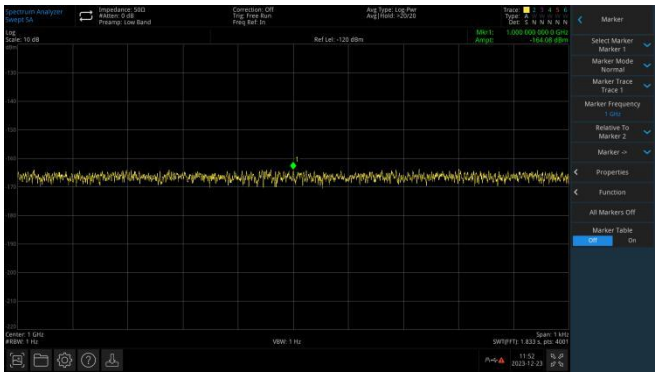


Multi-touch HD screen for quick operation

15.6-inch multi-touch HD capacitive screen for quick menu settings. It supports multiple gesture operations, such as dragging, expanding, and zoom-out on the trace. Convenient human-computer interaction solves the problem of cumbersome and difficult operation.

Excellent sensitivity to test weaker signals

The weak signal test is easily affected by the noise floor of the spectrum analyzer. DANL of UTS5000A series can as low as -163dBm, it has excellent sensitivity which can effectively test weak signals.

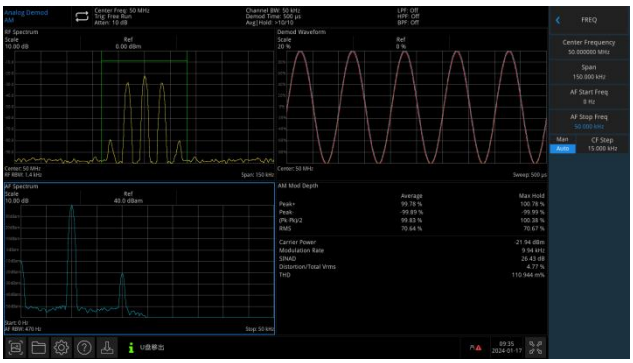


Removable dust mesh

With a detachable dust filter, after the instrument is used for a period of time, the user can remove the dust from the air inlet. To ensure the reliability of the whole machine, it can avoid short-circuit, burn or fire caused by dust.

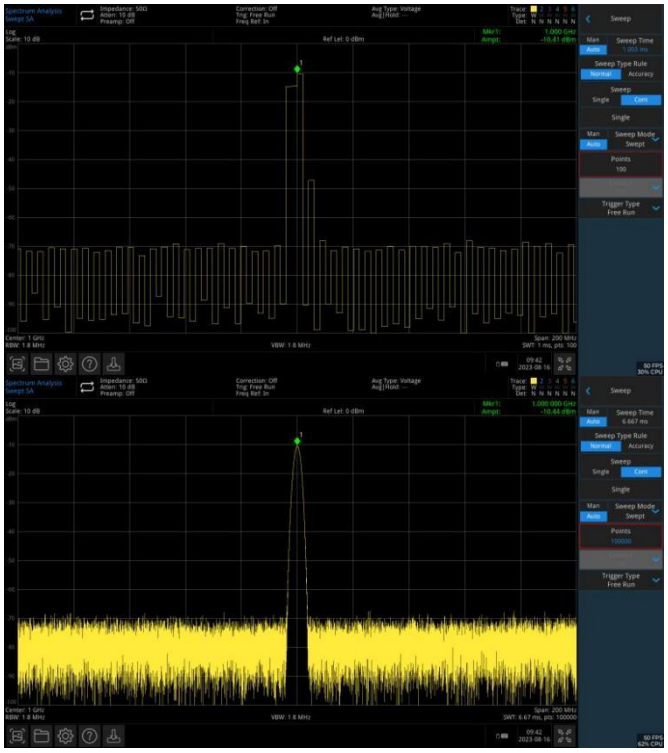
Analog demodulation

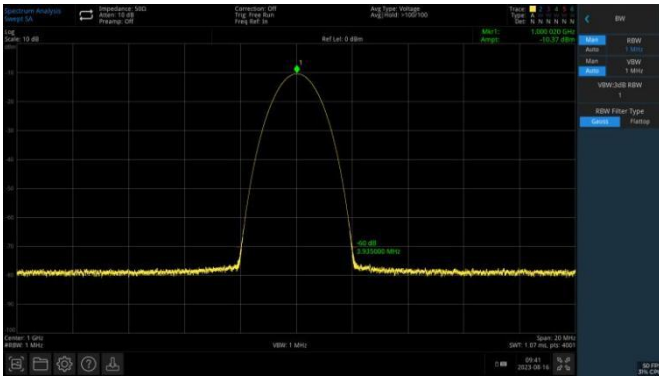
Provide demodulation analysis of AM and FM modulation signals



100001 Scan points

The UTS5000A series provides sweep points up to 100,001, providing higher frequency resolution, making it easier to capture signals that are difficult to detect.



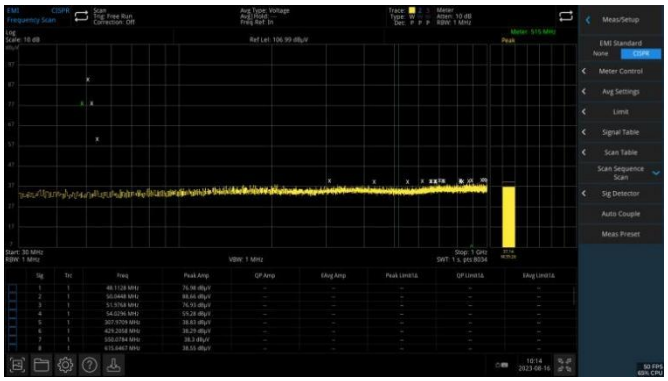


Outstanding selectivity

It has stronger signal resolution capability of adjacent unequal amplitudes.

EMI pre-compliance

UTS5000A series has optional components and near-field probes, it can help the user find and improve EMI defects in advance. Thereby shortening the development cycle.



Definitions and Conditions

"Specifications" describe the performance of the parameters covered by the product warranty in detail. Unless otherwise noted, these specifications apply to the temperature range of 20°C to 30°C.

"Typical" refers to additional product performance information that is not covered by the product warranty. When performance exceeds specifications, 80% of units can be demonstrated with a 95% confidence level over a temperature range of 20 °C to 30 ° C. Typical performance does not include measurement uncertainty.

"Nominal Value" means expected performance, or describes product performance that is useful in product applications but not covered by the product warranty.

The analyzer can meet its specifications under the following conditions.

The instrument should in a calibration cycle and has warmed up for at least 30 minutes. If the analyzer is stored within the allowable storage temperature range but exceed the allowable operating temperature range, it must be placed within the allowable operating temperature range for at least two hours before starting the analyzer.

Comparison Table of Product Function and Mode

	UTS5013A	UTS5026A
Spectrum analysis	●	●
Vector Signal Analysis	○	○
EMI	○	○
Analog demodulation	○	○
Advanced measurement	○	○
I/Q analysis	○	○
Real-time spectrum analysis	○	○

Note: ● standard ○ option

Frequency and Time

Frequency		
Model	UTS5013A	UTS5026A
Frequency range	9 kHz to 13.6 GHz	9 kHz to 26.5 GHz
Frequency band	LO multiple(N)	
0	1	100 kHz to 3.05 GHz
1	2	2.95 GHz to 7.55 GHz
2	2	7.45 GHz to 9.25 GHz
3	2	9.15 GHz to 11.05 GHz
4	2	10.95 GHz to 12.75 GHz
5	4	12.65 GHz to 14.55 GHz
6	4	14.45 GHz to 16.55 GHz
7	4	16.45 GHz to 18.55 GHz
8	4	18.45 GHz to 20.55 GHz
9	4	20.45 GHz to 24.55 GHz
10	4	24.45 GHz to 26.5 GHz
10MHz Internal Frequency Reference		
Frequency reference	10.000000 MHz	
Accuracy	± [(time since last adjustment x aging rate) + temperature stability +calibration accuracy]	
Temperature stability	20 to 30 °C	$\pm 3\times10^{-8}$
	Full temperature range	$\pm 3\times10^{-8}$
Frequency aging rate	$\pm 3\times10^{-7}$/ year(First year)	
Achievable initial calibration accuracy	$\pm 8\times10^{-8}$	
Sampling frequency reference accuracy	$\pm(3\times10^{-7}+3\times10^{-8}+8\times10^{-8})$	
1 year since the last calibration	$\pm 4.1\times10^{-7}$	
Residual FM	≤ 1 Hz p-p，20 ms，nominal	
Frequency Readout Accuracy (Start, Stop, Center, Marker)		
Marker resolution	Span / (Sweep point - 1)	
Marker frequency uncertainty	± (marker frequency x frequency reference accuracy + 1% x span + 10% x RBW+marker resolution)	
Marker mode	Normal,Delta△,Fixed	
Marker function	Marker Noise,Band Power,Band Density,N dB,Counter	

Counter resolution	0.001 Hz	
Uncertainty of frequency counter	±[marker frequency x frequency reference accuracy + Counter resolution]	
ΔCounter accuracy	± [Δ Frequency reading × Reference frequency accuracy+ 0.141Hz]	
Frequency Span (FFT and Swept mode)		
Range	0 Hz，10 Hz to 13.6 GHz	0Hz，10 Hz to 26.5 GHz
Resolution	Span / (Sweep point - 1)	
Accuracy	Swept	±[0.25% × span + Resolution]
	FFT	±[0.10% × span + Resolution]
Sweep Time and Triggering		
Sweep Time	Span = 0 Hz	1 µs to 6000 s
	Span ≥ 10 Hz	1 ms to 4000 s
Sweep Accuracy	Span ≥ 10 Hz，swept	± 0.01% nominal
	Span ≥ 10 Hz，FFT	± 40% nominal
	Span = 0 Hz	± 1% nominal
Sweep	Single,Cont	
Trigger Type	Free Run,External 1,External 2,Video,Periodic Timer	
Trigger Delay	Span = 0 Hz，FFT	-150 ms to +500 ms
	Span ≥ 10 Hz，swept	1 µs to +500 ms
	resolution	0.1 µs
Resolution Bandwidth(RBW)		
Range (–3dB bandwidth)	1 Hz to 3 MHz (10% Steps),4,5,6,8 MHz	
Selectivity (–60 dB/–3 dB)	<4.1 : 1 (nominal)	-60 dB : -3 dB
Bandwidth Accuracy (power)	1 Hz to 750 kHz	±1.0% (±0.044 dB) nominal
	820 kHz to 1.2 MHz	±2.0% (±0.088 dB) nominal
	1.3 MHz to 2.0 MHz	±0.13 dB nominal
	2.2 MHz to 3.0 MHz	±0.22 dB nominal
	4.0 MHz to 8.0 MHz	±0.32 dB nominal
Bandwidth Accuracy (–3.01 dB) (Sweep Time Rules=Accuracy)	1 Hz to 1.3 MHz	±2.0% nominal
	1.5 MHz to 3.0 MHz	±7.0% nominal
	4 MHz to 8 MHz	±15% nominal
Video Bandwidth (VBW)		
Range	1 Hz to 3 MHz (10% Steps),4,5,6,8 MHz	

Uncertainty of video bandwidth	±6.0% nominal
Sweep (trace) Point Range	
All spans	11 to 100001

Amplitude Accuracy and Ran

Amplitude Range		
Measurement range	Displayed average noise level (DANL) to +27 dBm	
Input attenuator range	0 to 50 dB，2 dB Steps	
Reference Level		
Log scale	-170 dBm to +30 dBm，0.01 dB Steps	
Linear scale	Same as Log (707 pV to 7.07 V)	
Accuracy	0 dB	
Preamplifier		
Frequency range	100 kHz to 7.5 GHz (Low frequency band)	
	100 kHz to 26.5 GHz (High frequency band)	
Noise figure	10 MHz to 26.5 GHz	Displayed average noise level (DANL) +174dBm nominal
Maximum Safe Input Level		
Average total power	+27 dBm (0.5W)	Input attenuation ≥ 10 dB，Preamp Off
	+27 dBm (0.5W)	Input attenuation ≥ 20 dB，Preamp On
Peak pulse power	+47 dBm (50W)	< 10 μs pulse width, < 1 % duty cycle and input attenuation ≥ 30 dB
DC volts	AC coupling	+16VDC
Display Range		
Log scale	0.1 to 1 dB/division，in 0.1 steps	
	1 to 20 dB/division，in 1 dB steps (10 display divisions)	
Linear scale	10 division	
Scale units	dBm,dBmV,dBμV,V,W	
Display Scale Switching Uncertainty		
Switching between linear and log	0 dB	
Log scale/grid 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
Trace Type	Clear/Write,Average,Max Hold,Min Hold

Frequency Response

20 °C ~30 °C，30% ~ 70% relative humidity，Input attenuation 10 dB，be relative to 50 MHz,σ = Nominal standard deviation。

		Specifications	95% (≈2σ)
Preamp Off	9 kHz to 10 MHz	±0.50 dB	±0.40 dB
	10 MHz to 3 GHz	±0.65 dB	±0.50 dB
	3 GHz to 13.6 GHz	±1.30 dB	±0.80 dB
	13.6 GHz to 19.3 GHz	±1.50 dB	±1.00 dB
	19.3 GHz to 24.2 GHz	±2.20 dB	±1.30 dB
	24.2 GHz to 26.5 GHz	±2.50 dB	±1.40 dB
Preamp On	100 kHz to 10 MHz	±0.60dB	±0.50 dB
	10 MHz to 3 GHz	±1.10dB	±1.00 dB
	3 GHz to 7.5 GHz	±1.40dB	±1.20 dB
	7.5 GHz to 13.6 GHz	±1.20dB	±1.00 dB
	13.6 GHz to 21 GHz	±1.40dB	±1.20 dB
	21 GHz to 24.2 GHz	±2.00dB	±1.80 dB
	24.2 GHz to 26.5 GHz	±2.80dB	±2.40 dB

Input Attenuation Switching Uncertainty

		Specifications	Additional information
Preamp off	50 MHz (reference frequency)	±0.30 dB	±0.15 dB typical
Relative to 10 dB (reference setting)	100 kHz to 3.0 GHz		±0.30 dB nominal
	3.0 GHz to 7.5 GHz		±0.50 dB nominal
	7.5 GHz to 26.5 GHz		±0.70 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)

50MHz	±0.40 dB
At all frequencies	±(0.40 dB+frequency response)
Preamp On	±(0.36 dB+frequency response) nominal

Input Voltage Standing Wave Ratio (VSWR) (0 dB input attenuation)

10 MHz to 26.5 GHz	< 2.4 nominal

Resolution Bandwidth Switching Uncertainty (Relative to reference RBW of 30 kHz)

RBW 1 Hz to 3 MHz	±0.15 dB

RBW 4,5,6,8 MHz	±1.0 dB

Dynamic Range

1 dB Gain Compression Point (two-tone)		
		Total power at input mixer
Preamp Off	10 MHz to 7.5 GHz	+6 dBm nominal
	7.5 GHz to 13.5 GHz	+4 dBm nominal
	13.5 GHz to 26.5 GHz	+2 dBm nominal
Preamp On	10 MHz to 7.5 GHz	- 15 dBm nominal
	7.5 GHz to 26.5 GHz	- 19 dBm nominal

Displayed Average Noise Level (DANL)

Input terminated, sample or average detector, averaging type = Log, 0 dB input attenuation, IF Gain = High, 1 Hz RBW, 20 to 30 °C.

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

Spurious Response

Residual responses (Input terminated and 0 dB attenuation)	200 kHz to 26.5 GHz (swept)		-90 dBm	
	Zero span or FFT or other frequencies		-100 dBm nominal	
Mirror response (primary mixer)	Tuning frequency (f)	Mixer level		Response
	10 MHz to 26.5 GHz	-10 dBm		-70dBc,-80dBc nominal
Mirror response (secondary mixer)	Tuning frequency (f)	Excitation frequency	Mixer level	Response

	10 MHz to 20.5 GHz	f+1470MHz	-10 dBm	-70dBc,-80dBc nominal
	20.5GHz to 26.5GHz	f-1470MHz	-10 dBm	-70dBc,-80dBc nominal
LO related spurious	10MHz to 26.5GHz	---	-10 dBm	-64dB nominal
Other Spurious				
Intermediate frequency feedthrough	Mixer level		Response	
	-10 dBm		-75 dBc,-80 dBc nominal	
First order RF (f ≥ 10 MHz from carrier)	-10 dBm		-70 dBc,-80 dBc nominal	
Higher order RF (f ≥ 10 MHz from carrier)	-10 dBm		-70 dBc,-80 dBc nominal	
Second Harmonic Distortion (SHI)				
Source frequency	SHI(nominal)			
10MHz to 3.75GHz	+45 dBm			
3.75GHz to 13.25GHz	+62 dBm			
Third Order Intermodulation (TOI)				
Preamp off (mixer input -20dBm, 100kHz frequency interval dual tone signal, 0dB attenuation, 20 °C to 30 °C)	10 MHz to 2 GHz		+12 dBm, +16 dBm Typical	
	2 GHz to 3 GHz		+12 dBm, +17 dBm Typical	
	3 GHz to 7.5 GHz		+12 dBm, +16 dBm Typical	
	7.5 GHz to 13.6 GHz		+11 dBm, +15 dBm Typical	
	13.6 GHz to 26.5 GHz		+8 dBm, +12 dBm Typical	
Preamp on (mixer input -45dBm, 100kHz frequency interval dual tone signal, 0dB attenuation, 20 °C to 30 °C)	10 MHz to 26.5 GHz		-8 dBm nominal	

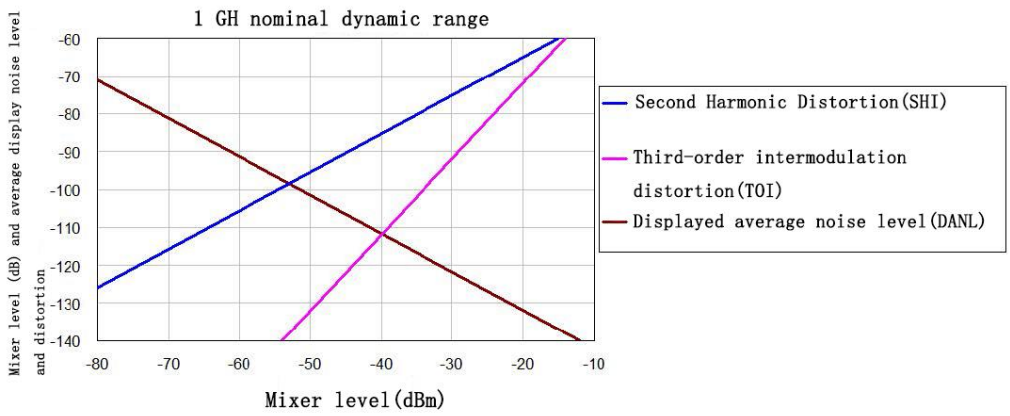


Figure 1.0 Frequency band nominal dynamic range, second-order and third-order distortion, 10 MHz to 3 GHz

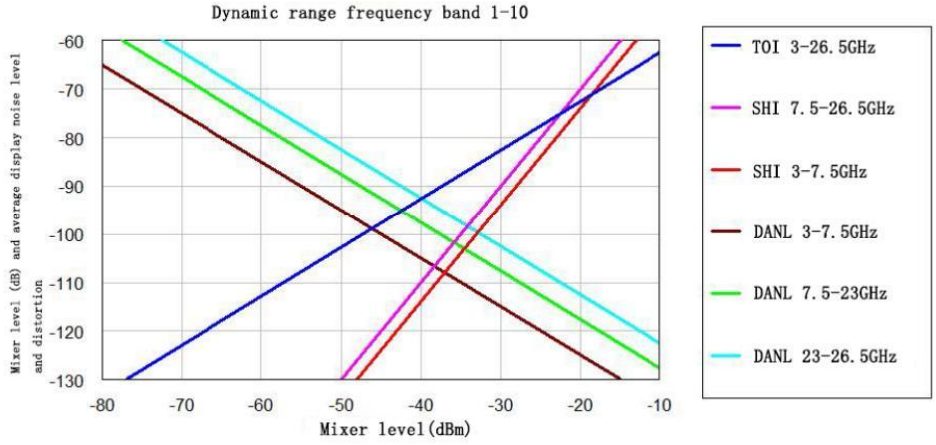


Figure 2. Nominal Dynamic Range - Second and Third Order Distortion, 3 GHz to 26.5 GHz

Phase Noise	Frequency offset	Index	Typical
Offset relative to continuous wave signal Fc=1 GHz, RBW=1 kHz, VBW=10 Hz, Sampling detection, Log avg, avg >50	100 Hz	---	-80 dBc/Hz nominal
	1 kHz	-100 dBc/Hz	-102 dBc/Hz
	10 kHz	-106 dBc/Hz	-107 dBc/Hz
	100 kHz	-108 dBc/Hz	-110 dBc/Hz
	1 MHz	-130 dBc/Hz	-132 dBc/Hz

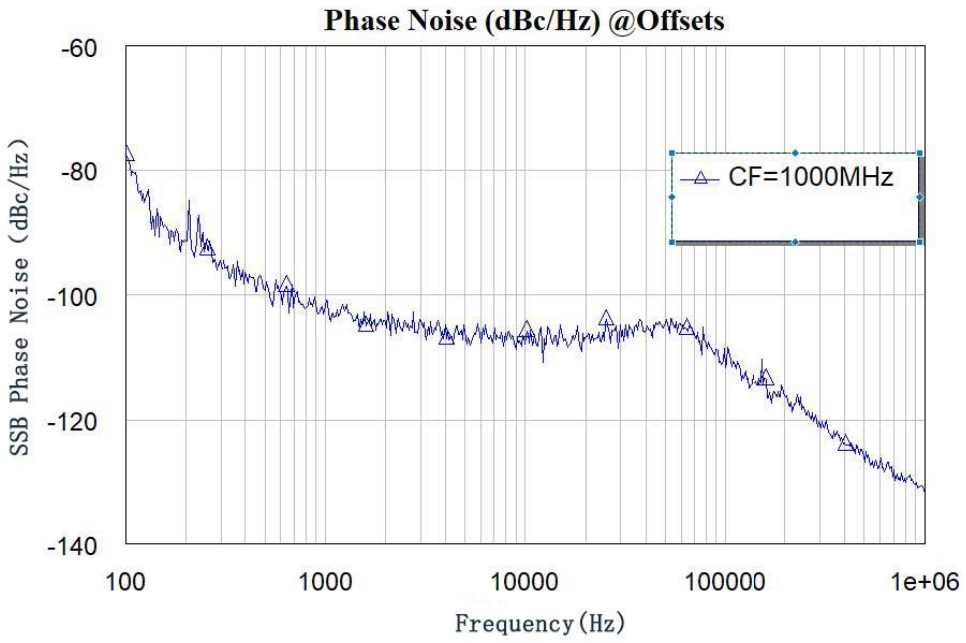


Figure3.Nominal phase noise at 1 GHz center frequency

Advanced Measurement(Options)

Power Suite Measurement	
Channel Power	Channel power,Power integral density
T-power	Zero sweep time integral power
Occupied Bandwidth	Occupancy 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 intermodulation	Automatic search based on dual tone peak
harmonic analysis	Maximum number of harmonics 10
Spectrum Monitoring	
Waterfall Plot	

Analog demodulation (option)

Demodulation		
Frequency range	2 MHz to 13.6 GHz	2 MHz to 26.5 GHz
Carrier power accuracy	±2 dB，nominal	
Input power	-30 dB to +20 dBm	Automatic attenuation
AM Measurement (option)		
Modulation rate	20 Hz to 100 kHz	
accuracy	1 Hz (nominal)	Modulation rate < 1 kHz
	< 0.1% Modulation rate(nominal)	Modulation rate≥ 1 kHz
depth	5 to 95%	
accuracy	±4% (Nominal)	
FM Measurement (option)		
Modulation rate	20 Hz to 100 kHz	
accuracy	1 Hz (nominal)	Modulation rate < 1 kHz
	< 0.1% Modulation rate(nominal)	Modulation rate ≥ 1 kHz
frequency offset	1 kHz to 400 kHz	
accuracy	±4% (nominal)	

Vector Signal Analysis (option)

General Parameters		
Carrier Frequency	2 MHz to 13.6 GHz	2 MHz to 26.5 GHz
Carrier power accuracy	±2 dB,nominal	
Carrier power range	-30 dBm to +20 dBm,nominal	
Measurement Function		
Modulation type	ASK(2 ASK);	
	FSK: 2 FSK，4 FSK，8 FSK，16 FSK	
	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	
Number of sign	4，6，8，10，12，14，16	

points/oversampling rate		
Symbol rate	1 ksps to 2.5 Msps，Number of symbol points * symbol rate≤10 Msps	
holdoff	500 ms	
Wave filter		
filter type	Rising cosine/Nyquist, root rising cosine/root Nyquist, Gaussian, half sine, rectangular	
filter length	2 to 128	
Alpha/BT	Alpha 0.01 to 1，BT 0.01 to 10	
Display		
Data	IQ measurement time domain, IQ measurement frequency domain	
	IQ reference time domain	
	Symbol error statistical table, error vector time domain, error vector frequency domain	
	Time domain, frequency domain, IQ amplitude error, IQ phase error	
Window layout	1，2，3，4	
Format	Logarithmic amplitude,Linear amplitude,Real part,imaginary part	
	IQ diagram,Constellations,I eye diagram,Q-eye diagram	
	Phase diagram,Phase unwrapping diagram,Phase Tree	
Statistical Table of Symbol Error		
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 Analyzer (option)

Frequency		
Frequency sweep width	Standard parts	9 kHz to 25 MHz
	Option B40	9 kHz to 40 MHz
Resolution bandwidth (spectrum measurement)		
Range	Overall	100 mHz to 3 MHz
	Span= 1 MHz	50 Hz to 1 MHz
	Span= 10 kHz	1 Hz to 10 kHz
	Span= 100 Hz	100 mHz to 100 Hz

Window shapes	Flat top, Uniform, Hanning, Gaussian, Blackman, Blackman-Harris, Kaiser Bessel (K-B 70 dB, K-B 90 dB and K-B 110 dB)		
Analysis bandwidth			
Standard	9 kHz to 25 MHz		
Option B40	9 kHz to 40 MHz		
IF frequency response (standard 10 MHz IF path)			
IF frequency response (demodulation and FFT response relative to the center frequency, 20 to 30 °C)			
Center frequency (GHz)	Span(MHz)	Max. error	RMS(Nominal)
≤ 3.0	≤ 10	±0.4 dB	0.03 dB
3.0 < f ≤ 26.5	≤ 10		0.10 dB
IF phase linearity (deviation from mean phase linearity, nominal)			
Center frequency (GHz)	Span(MHz)	Peak-to-peak	RMS(Nominal)
≤ 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 (10 MHz IF path), Time record length			
IQ analyzer	4,000,000 IQ sample pairs		
Sample rate at ADC	90 MSa/s		
ADC resolution	14 bits		
Data acquisition (B40 IF path), Time record length			
IQ analyzer	4,000,000 IQ sample pairs		
Sample rate at ADC	90 MSa/s		
ADC resolution	14 bits		

Real-Time Spectrum Analyzer (option)

Frequency and time accuracy	
Real time bandwidth analysis	25MHz
	40MHz
Full amplitude accuracy, minimum signal duration at 100% POI	Maximum scanning width,Default window Kaiser
	7.45μs
Detection mode	Peak, Negative peak, Sample, Vrms Average

Number of traces	6					
Window Type	Gauss,Flattop,Blackman Harris,Rect,Hann,Kaiser					
Resolution bandwidth	Provide 6 RBW for each type of window,Except for rectangular windows					
	Kaiser					
	Span	Min(RBW)	Max(RBW)			
	40MHz	100kHz	3.21MHz			
	25MHz	62,8kHz	2.01MHz			
	10MHz	25.1kHz	804kHz			
	1MHz	2.51kHz	80.4kHz			
	100kHz	251Hz	8.04kHz			
Maximum Sample Rate	51.2Msa/s					
FFTrate	146,484/s (Nominal)					
Number of markers	10					
Amplitude resolution	0.01 dB					
Frequency points	801					
Acquisition time	Max Sample Rate > 156.5 μs					
Minimum signal duration at 100% POI						
	Duration（μs）					
Span	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
Amplitude						
Amplitude flatness (conventional spectrum)	±0.5dB（Nominal）					
SFDR	< -60dBc（Typical）					
Probability density display						
range	0 to 100%（set 0.1%）					
Minimum Span	5kHz					
Duration	32ms to 10s					
Spectrogram						
Maximum collection volume	8,192					
Dynamic range of color coverage	200dB					

PVT	
Minimum capture time	187.9μs
Maximum capture time	40s
Trigger	
Trigger Type	Free Run,External 1,External 2,Power(time),FMT
FMT	
Trigger View	Density,Spectrogram,Normal,PVT
Trigger resolution	0.5dB（Nominal）
Trigger Criteria	Enter,Leave,Inside,Outside,Enter-Leave,Leave-Enter

Interface and Display

Common Interface	
Front panel trace source output	NMD 2.92 male head
10MHz Ext Ref In	10 MHz，- 5 dBm to +10 dBm，50 Ω，BNC pubic head
10 MHz out	10 MHz，> 0 dBm，50 Ω，BNC pubic head
External trigger input	TTL，BNC pubic head
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 TFT LCD
Display resolution	1920 x 1080

General Technical Specifications

Specifications		
Supply voltage	100 to 240 VAC (Fluctuations± 10%)	100 to 120 VAC (Fluctuations± 10%)
Frequency	50 / 60 Hz	400 Hz
Environment		
Temperature range	operation：0 °C ~ +40 °C	
	Non-operational：-20 °C ~ +70 °C	

Cooling method	Fan forced cooling	
Humidity range	operation: Below +35 °C ≤ 90%relative humidity; Non-operational: +35 °C ~ +40 °C ≤ 60%relative humidity	
Altitude	operation: Below 3000 m; Non-operational: Below 15000 m	
pollution degree	2	
Usage environment	Indoor use	
Mechanical Specifications		
Dimensions	445 mm×311 mm×195 mm (Width x Height x Length)	
Net weight	About 11kg	
Calibration cycle	The recommended calibration circle is one year	
Regulatory Standards		
EMC	Compliance with EMC directives(2014/30/EU), Conform to or better than IEC 61326-1:2021/EN61326-1:2021, IEC 61326-2-1:2021/EN61326-2-1:2021	
Conductive disturbance	CISPR 11/EN 55011	CLASS B group 1, 150kHz-30MHz
Radiation disturbance	CISPR 11/EN 55011	CLASS B group 1, 30MHz-1GHz
Electrostatic discharge (ESD)	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	0 V/m(80 MHz to 1 GHz); 3 V/m(1.4 GHz to 2 GHz); 1 V/m(2.0 GHz to 2.7GHz)
Electrical fast transient burst (EFT)	IEC 61000-4-4/EN 61000-4-4	2 kV(AC input port)
Surge	IEC 61000-4-5/EN 61000-4-5	1 kV(Live line to zero line) 2 kV(Fire/zero line to ground)
Immunity to RF continuous conduction	IEC 61000-4-6/EN 61000-4-6	3 V, 0.15-80 MHz
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
Safety Regulations		
	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

Ordering Information

	Description	Ordering No.
Models	Signal Analyzer，9 kHz to 13.6 GHz	UTS5013A
	Signal Analyzer，9 kHz to 26.5 GHz	UTS5026A
Standard accessories	Power cord × 1	
	USB cable × 1	UT-D14
Optional accessories		
Options	Advanced Measurement Kit	UTS5000A-AMK
	EMI Analysis	UTS5000A-EMI
	Analog Demodulation Measurement	UTS5000A-AMA
	Vector Signal Analysis	UTS5000A-VSA
	I/Q Analysis	UTS5000A-I/Q
	Real-time Spectrum Analysis	UTS5000A-RTSA
UT-CK02 accessories kit	UT-W03-40GHz-2.92J RF Cable × 1	UT-W03-40GHz
	RF connector 2.92-KKG Double pubic head × 2	UT-C04-40GHz
	UT-C03-18GHz RF connector SMA-N × 1	UT-C03-18GHz
UTS-EMI01 Near-field probes kit	50Ω-SMA-SMB Cable × 1	UT-W03
	Adapter SMA-N-KJ-T DC-6GHz × 1	UT-C01
	Near field probe，frequency range 30 MHz-3 GHz，Detection range 10 cm × 1	NFP-3G-P1
	Near field probe，frequency range30MHz-3GHz，Detection range 3 cm × 1	NFP-3G-P2
	Near field probe，frequency range30MHz-2GHz，resolution 5 mm × 1	NFP-2G-P3
	Near field probe，frequency range30MHz-3GHz，resolution 2 mm × 1	NFP-3G-P4

Warranty and Service

UNI-T Technical Support Hotline: 400-876-7822

If the signal analyzer is under warranty or is covered by a maintenance contract, it will be repaired under the terms of warranty as below. If the analyzer is no longer under warranty, UNI-T will notify you of the cost of repair after examining the analyzer.

UNI-T UTS5000A series Signal analyzer is under warranty or is covered by a maintenance contract, it will be repaired under the teal analyzers provide 3- years warranty for mainframes and 1-year warranty for accessories as standard.

The above warranty applies to all UNI-TREND test measurement instrument products procured through the UNI-TREND authorized distributors. Product purchased from outside the UNI-TREND instruments network will be serviced by the selling agents and not UNI-TREND TECHNOLOGY. Please Go to UNI-T official website ->instruments->support->Where to buy to find the authorized test and measurement instrument distributors.

Learn more at: www.uni-trend.com

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