

UNI-T[®]

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UTS3000A Series Signal Analyzers

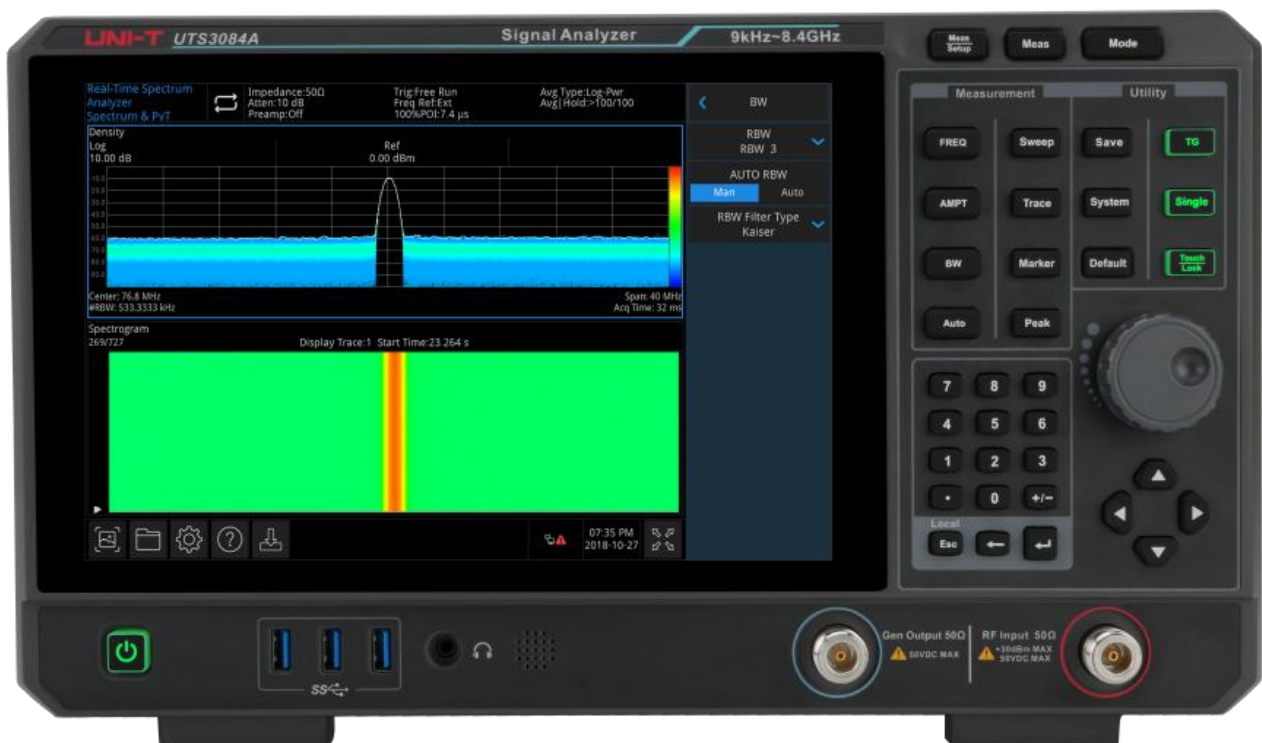
Data Sheet

V 1.2

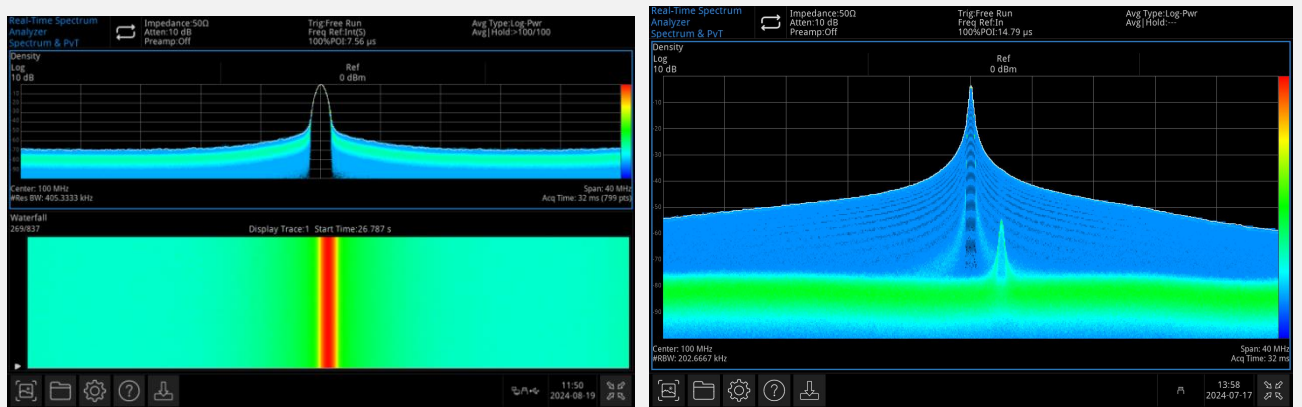
December, 2025

Product Features

- Frequency Range: 9 kHz to 8.4 GHz (Max.)
- Displayed Average Noise Level (DANL):165 dBm/Hz (Typ.)
- Phase Noise: < -102 dBc/Hz (Offset Phase Noise: 10 kHz, Typ.)
- Full Amplitude accuracy: < 0.7 dB
- Sweep Points up to 40,001
- Minimum Resolution Bandwidth (RBW): 1 Hz
- Supports tracking generator output and Vector Network Analysis
- Real-time Spectrum Analysis mode provides display methods for both probability density spectrum and spectrum, allowing real-time visualization of measured results
- Various trigger mode and trigger template
- Max. Analyze Bandwidth: 40 MHz (Option)
- Supports Advanced function of One Key Measurement (Option)
- Supports EMI Analysis function (Option)
- Supports Analog Demodulation Analysis (Option)
- Supports Vector Signal Analysis (Option)
- 10.1-inch 1280 × 800 Multi-touch HD screen
- Supports SCPI (Standard Commands for Programmable Instruments)

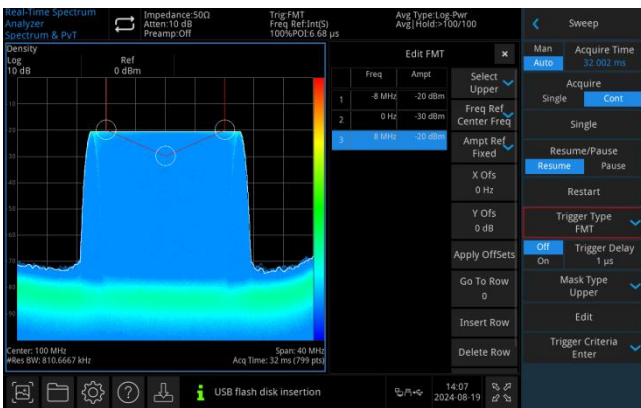


Real-time Frequency Sweep Analysis Mode



Use combined display with density spectrograms for continuous spectral display, visualizing the frequency occurrence of signals and capturing small signals in the presence of larger ones.

Frequency Template Trigger



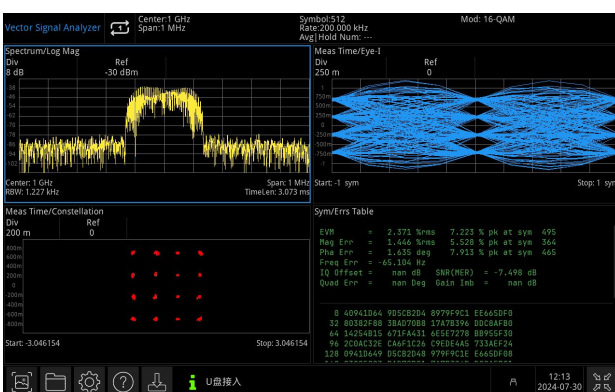
Use the frequency template trigger to generate the measurement of episodic or transient signals.

Excellent Selectivity



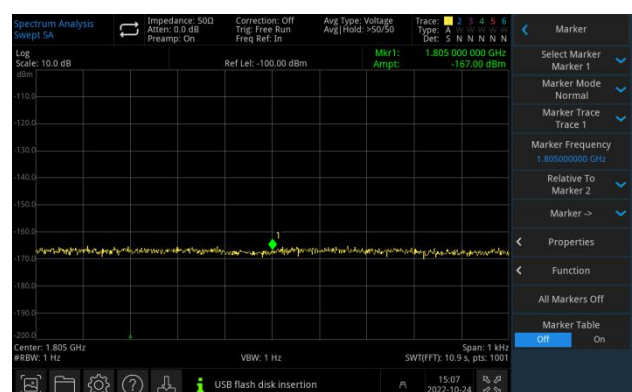
It has a strong capability to distinguish between signals with unequal adjacent amplitudes.

Signal Demodulation Analysis



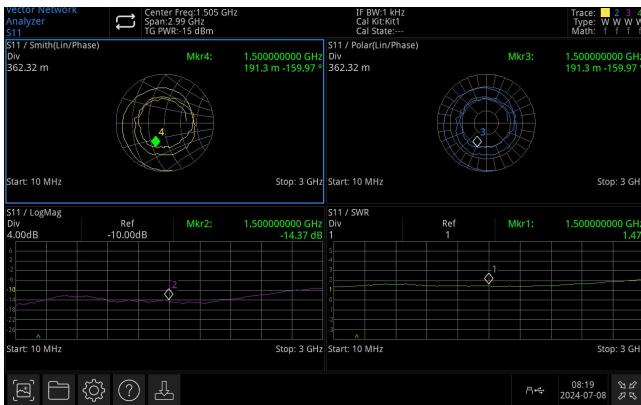
Provides AM, FM, and PM analog signal Analysis; Supports digital signal Analysis for ASK, FSK, PSK, QAM, MSK, DPSK, including EVM calculation.

Excellent Sensitivity to Test Weaker Signals



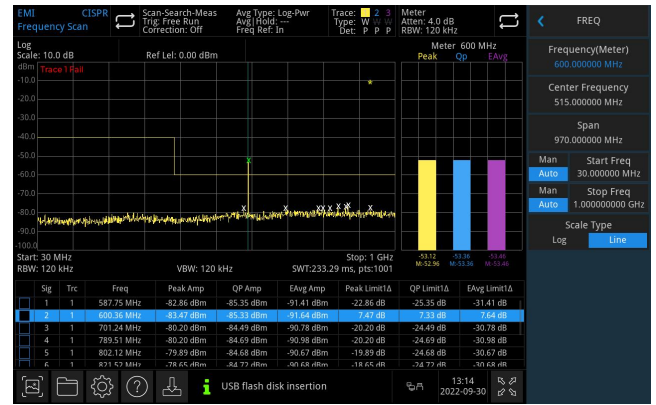
Weak signal testing can be significantly impacted by the noise floor of the spectrum analyzer. With a DANL as low as -165 dBm, UTS3000A series provides excellent sensitivity, enabling effective testing of weak signals.

Vector Network Analysis



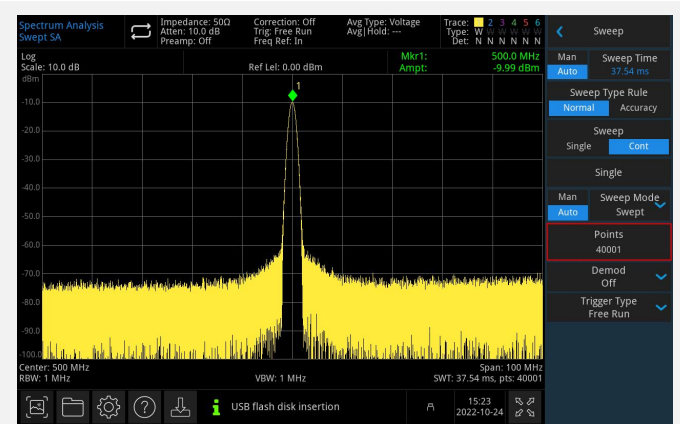
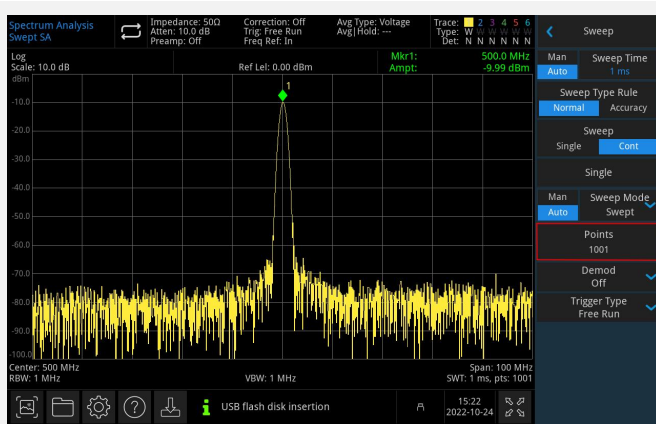
VNA mode allows for precise characterization of the network properties of measured components and circuit networks by measuring S11 and S21 parameters, with various display methods such as Smith charts and polar coordinates. The touch to based interface simplifies the measurement process, enabling users to achieve better results in less time.

EMI Pre-compliance and Conformance Test



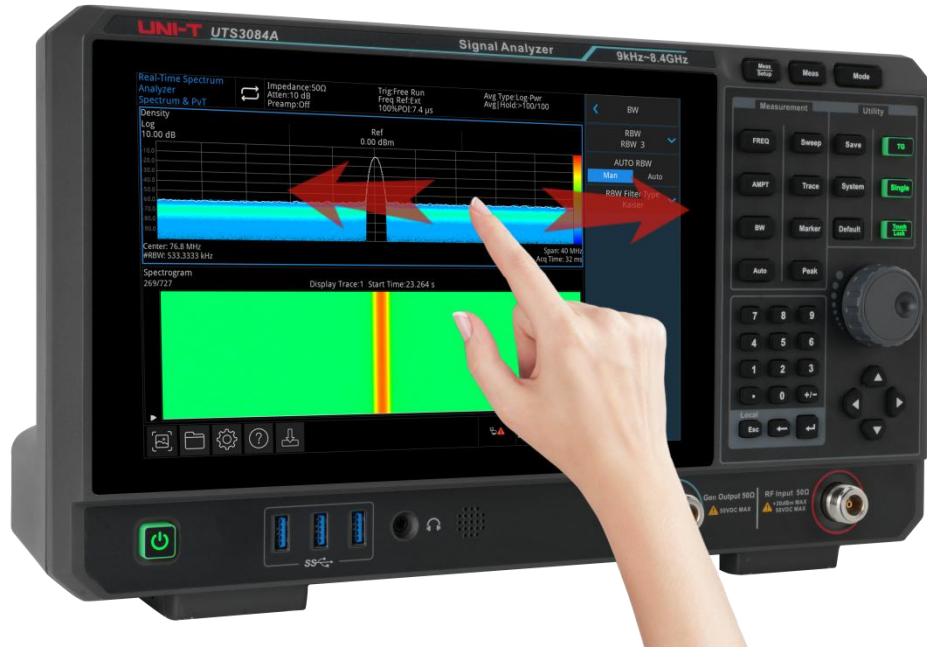
Passing electromagnetic interference (EMI) performance testing early can prevent delays in bringing your product to market. To ensure a successful final EMI conformance test, conduct pre-compliance testing during product development. Identifying EMI issues early in the design cycle allows for in to house conducted and radiated emission testing, which can shorten the test cycle.

Sweep Point up to 40,001



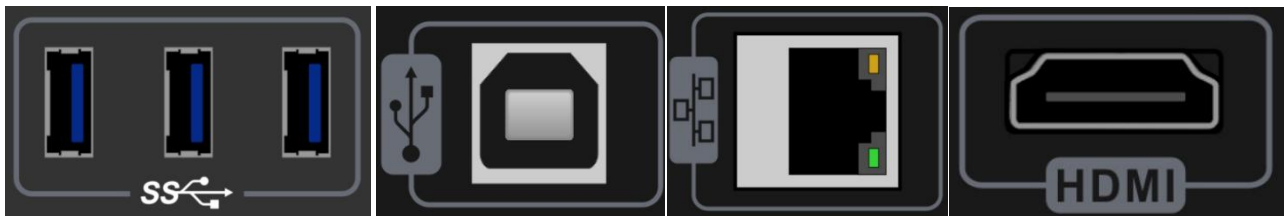
The UTS3000A series provides up to 40,001 sweep points, offering higher frequency resolution and making it easier to capture hard-detect signals.

Multi-touch HD screen for quickoperation



The 10.1-inch multi-touch HD capacitive screen offers quick menu settings and supports various gestures, including dragging, expanding, and zooming on traces. This user to friendly interface enhances human to computer interaction, addressing issues of cumbersome and complex operations.

Various Interfaces



UTS3000A series offers multiple connection options, enhancing flexibility and convenience.

Multiple Control Method

```

def test_square_character(dst_instr, src_instr, image_list, sheet_list, test_para, show_channel1234_0000T):
    test_para['AutoTest'] = True
    dst_instr.write("*RST")
    src_instr.write("*RST")
    time.sleep(3)
    dst_instr.write(":ACQ:TYPE AVER")
    dst_instr.write(":ACQ:AVER:COUN 8")
    time.sleep(1)
    data = dst_instr.query("SYSTEM:INSTR?").strip('\n').strip('\r')
    strArray = data.split(',')
    channelNumbers = 4
    for i in range(channelNumbers):
        srcChannelNumber = i + 1
        dstChannelNumber = i + 1
        channelName = 'CH{0}'.format(dstChannelNumber)
        src_instr.write(":CHANnel{0}:BASE:WAVE SQUARE".format(srcChannelNumber))
        src_instr.write(":CHANnel{0}:OUTPUT,1".format(srcChannelNumber))
        dst_instr.write(":CHAN{0}:DISP ON".format(dstChannelNumber))
        time.sleep(1)
        dst_instr.write(":CHAN{0}:COUP DC".format(dstChannelNumber))
        dst_instr.write(":WAVEform:SOURce CHAN{0}".format(dstChannelNumber))
        dst_instr.write(":WAVEform:MODE NORMAL")
        dst_instr.write(":WAVEform:FORMat BYTE")
        for amp,vbase in zip(amps, vbases):
            src_instr.write(":CHANnel{0}:BASE:AMPLitude {1}".format(srcChannelNumber, amp))
            time.sleep(0.5)
            dst_instr.write("TRIGger:SOURce CHANnel{0}".format(dstChannelNumber))
            dst_instr.write("CHAN{0}:SCAL {1:.6f}V".format(dstChannelNumber, vbase))
            time.sleep(0.1)
        for freq,timeBase,precision in zip(freqs, times, precisions):
            if(freq <= 100):

```

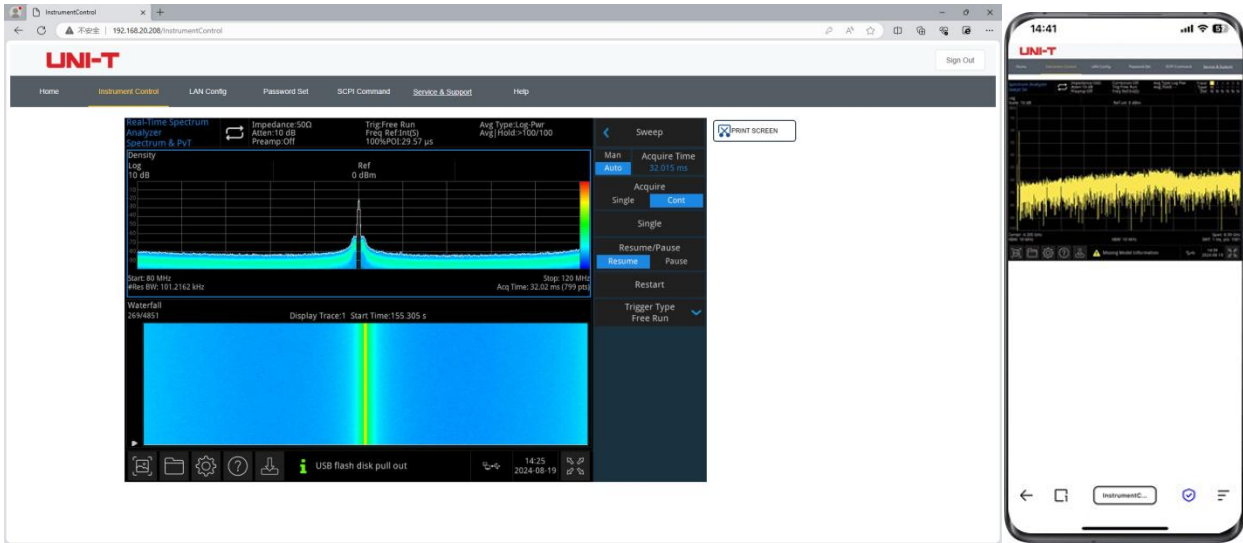
The instrument can be controlled using SCPI commands or through secondary development.

Instrument Management (Free Software provided by UNI-T)



Install the instrument management software on a PC via LAN or USB flash drive to control the instrument.

WebServer



Supports SCPI remote control, remote viewing, and control of exported trace data, as well as other operations. It enables online browsing and use and supports access from both PCs and mobile phones.

Definitions and Conditions

“**Specifications**” describes the performance of the parameters covered by the product warranty. Unless otherwise noted, these specifications apply within the temperature range of 20°C to 30°C.

“**Typical Value**” (Typ.) refers to additional performance information that is not covered by the product warranty. When performance exceeds specifications, 80% of units can demonstrate this performance with a 95% confidence level over a temperature range of 20°C to 30°C. Typical performance does not account for measurement uncertainty.

“**Nominal Value**” (Nom.) refers to the expected performance or describes product performance useful in applications but not covered by the product warranty.

The analyzer can meet its specifications under the following conditions:

The instrument should be within its calibration cycle and warmed up for at least 30 minutes.

If the analyzer has been stored within the allowable storage temperature range but outside the allowable operating temperature range, it must be placed within the allowable operating temperature range for at least two hours before use.

Product Function and Model Comparison Table

	UTS3084A	UTS3060A	UTS3036A
Spectrum Analyzer	●	●	●
Real-time Spectrum Analyzer	●	●	●
Vector Network Analyzer	●	●	●
Tracking Generator	●	●	●
I/Q Analyzer	○	○	○
EMI	○	○	○
Analog Demodulation	○	○	○
Vector Signal Analyzer	○	○	○
Phase Noise Analysis	○	○	○
Advanced Measurement	○	○	○

Note: ● Standard, ○ Option, × Not Available

Frequency and Time Specification

Frequency			
Model	UTS3084A	UTS3060A	UTS3036A
Frequency Range	9 kHz to 8.4 GHz	9 kHz to 6 GHz	9 kHz to 3.6 GHz
Resolution	1 Hz		
10 MHz Internal Frequency Reference			
Reference Frequency	10.000000 MHz		
Accuracy	$\pm [(\text{Time since last calibration} \times \text{Frequency aging rate}) + \text{Temperature stability} + \text{Initial calibration accuracy}]$		
Achievable Initial Calibration	< 1 ppm		
Temperature Stability	< 1 ppm 5 to +45°C, take 25°C as reference		
Frequency aging Rate	0.5 ppm/First year, 3 ppm/Twenty years		
Frequency Readout Accuracy (start, stop, center, and marker)			
Marker Resolution	Span / (Sweep point -1)		
Marker Frequency Uncertainty	$\pm (\text{Marker frequency} \times \text{Frequency reference accuracy} + 1 \% \times \text{Span} + 10 \% \times \text{RBW} + \text{Marker resolution})$		
Marker Mode	Normal, Delta Δ , Fixed		
Marker Function	Marker Noise, Band Power, Band Density, N dB, Counter		
Counter Resolution	1 Hz		
Uncertainty of Frequency Counter	$\pm [\text{Marker frequency} \times \text{Frequency reference accuracy} + \text{Counter resolution}]$		
Frequency Span			
Range	0 Hz, 100 Hz to 8.4 GHz	0 Hz, 100 Hz to 6 GHz	0 Hz, 100 Hz to 3.6 GHz
Accuracy	Swept	$\pm [0.25\% \times \text{Span} + \text{Span} / (\text{Sweep point} - 1)]$	
	FFT	$\pm [0.10\% \times \text{Span} + \text{Span} / (\text{Sweep point} - 1)]$	
Sweep time and Trigger			
Sweep time Range	1 ms to 4000 s (Span \neq 0)	1 μ s to 4000 s (Span=0)	
Sweep type rule	Normal, accuracy		
Sweep Mode	Swept, FFT		
Sweep/Measurement	Continuous, single		
Sweep Trigger	Free Run, External, Video		
External trigger Input	5V TTL, rising edge/falling edge		
Resolution Bandwidth (RBW)			
Range (-3.01 dB)	1 Hz to 10 MHz, step with 1-3-10		

Bandwidth)		
Selectivity	< 4.8:1 (Nom.)	-60 dB: -3 dB
Bandwidth Accuracy	< 5% (Nom.)	
Video Bandwidth (VBW)		
VBW Range	1 Hz to 10 MHz, step with 1-3-10	
VBW Uncertainty	< 5%	

Amplitude Accuracy and Range

Amplitude Range		
Range	10 MHz to maximum frequency: DANL to +30 dBm	
Reference Level	-100 dBm to +30 dBm, step with 1 dB	
Preamp	20 dB (Nom.), 100 kHz to 3.6 GHz (6 GHz, 8.4 GHz)	
Input Attenuation	0 to 51 dB, step with 1 dB	
Maximum Damage Level		
DC Voltage	50 VDC	Max.
Maximum Continuous Wave RF Power	≤+30 dBm	Input attenuation >20 dB
Display Range		
Log Scale	1 dB to 200 dB	
Linear Scale	0 to reference level	
Scale Units	dBm, dBmV, dBμV, V, W	
Sweep (trace) Point Range	40,001	
Number of Traces	6	
Detection Mode	Peak, Negative Peak, Sample, Normal, Average	
Trace Type	Refresh, Trace Average, Max. Hold, and Min. Hold	
Frequency Response		
20°C to 30°C, 30% to 70% RH., Input Attenuation 20 dB, Relative to 50 MHz		
Preamp Off	9 kHz to 3.6 GHz	± 0.6 dB; ± 0.3 dB (Typ.)
	3.6 GHz to 8.4 GHz	± 0.8 dB; ± 0.6 dB (Typ.)
Preamp On	100 kHz to 3.6 GHz	± 1.0 dB; ± 0.8 dB (Typ.)
	3.6 GHz to 8.4 GHz	± 1.2 dB; ± 1.0 dB (Typ.)
Error and Accuracy		
Resolution Bandwidth Switching Uncertainty	Relative to a 10 kHz RBW, Logarithmic Resolution ± 0.2 dB, Linear Resolution ± 0.01 (Nom.)	
Input Attenuation Switching	20°C to 30°C, fc=50 MHz, Preamp Off, Relative to 20 dB	

Uncertainty	Attenuation, Input Attenuation: 1 to 51 dB ± 0.5 dB
Absolute Amplitude Accuracy	20°C to 30°C, $f_c=50$ MHz, RBW=1 kHz, VBW=1 kHz, peak detection, input attenuation: 20 dB ± 0.4 dB, input signal level: -20 dBm, Preamp Off ± 0.5 dB, input signal level: -40 dBm, Preamp On
Total Absolute Amplitude Accuracy	20°C to 30°C, $f_c>100$ kHz, input Signal level: -50 dBm to 0 dBm, RBW=1 kHz, VBW=1 kHz, Peak detection, input Attenuation: 20 dB, Preamp Off, 95% Reliability $\pm (0.4$ dB + Frequency response)
Input Voltage Standing Wave Ratio (VSWR)	< 1.8 (Nom.)

Dynamic Range Specifications

1 dB Gain Compression Point

20°C to 30°C, $f_c \geq 50$ MHz, input attenuation 0 dB, Preamp off
> - 5 dBm (Nom.)

Displayed Average Noise Level (DANL)

20°C to 30°C, input load, 0 dB RF attenuation, RBW=1 Hz, sample or average detection, trace average>50

Preamp off	100 kHz to 500 kHz	-120 dBm (Nom.)
	500 kHz to 1 MHz	-125 dBm, -128 dBm (Typ.)
	1 MHz to 10 MHz	-130 dBm, -132 dBm (Typ.)
	10 MHz to 200 MHz	-145 dBm, -150 dBm (Typ.)
	200 MHz to 1.5 GHz	-145 dBm, -148 dBm (Typ.)
	1.5 GHz to 3.2 GHz	-143 dBm, -146 dBm (Typ.)
	3.2 GHz to 4.5 GHz	-142 dBm, -145 dBm (Typ.)
	4.5 GHz to 6.2 GHz	-140 dBm, -143 dBm (Typ.)
	6.2 GHz to 7.5 GHz	-138 dBm, -143 dBm (Typ.)
	7.5 GHz to 8.4 GHz	-139 dBm, -141 dBm (Typ.)
Preamp on	100 kHz to 500 kHz	-135 dBm (Nom.)
	500 kHz to 1 MHz	-140 dBm, -145 dBm (Typ.)
	1 MHz to 10 MHz	-150 dBm, -153 dBm (Typ.)
	10 MHz to 200 MHz	-162 dBm, -166 dBm (Typ.)
	200 MHz to 1.5 GHz	-162 dBm, -165 dBm (Typ.)

1.5 GHz to 3.2 GHz	-160 dBm, -162 dBm (Typ.)
3.2 GHz to 4.5 GHz	-157 dBm, -160 dBm (Typ.)
4.5 GHz to 6.2 GHz	-155 dBm, -158 dBm (Typ.)
6.2 GHz to 7.5 GHz	-158 dBm, -160 dBm (Typ.)
7.5 GHz to 8.4 GHz	-155 dBm, -158 dBm (Typ.)

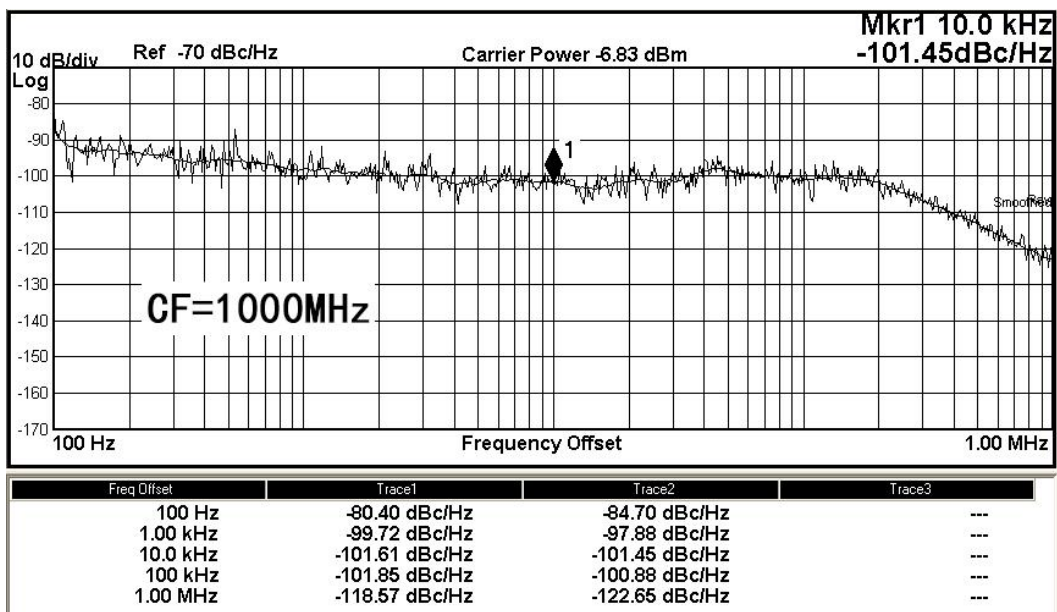
Spurious Responses

Second harmonic distortion (SHI)/	20°C to 30°C, Preamp off, signal input -30 dBm, 0 dB RF attenuation
Third-order intermodulation (TOI)	20°C to 30°C, Preamp off, signal input -20 dBm, 0 dB RF attenuation, $f_c \geq 50$ MHz
Input related spurious	20°C to 30°C, mixer level -30 dBm
Residual response	20°C to 30°C, input port 50 Ω, input attenuation 0 dB
	$f_c \geq 50$ MHz
	-65 dBc/+35 dBm
	+10 dBm; +13 dBm (Nom.)
	< -60 dBc
	< -90 dBm

Phase Noise

20°C to 30°C, $F_c=1$ GHz, RBW=1 kHz, VBW=10Hz, sample detection, trace average>50

Offset	
10 kHz	-100 dBc/Hz, -102 dBc/Hz (Typ.)
100 kHz	-100 dBc/Hz, -102 dBc/Hz (Typ.)
1 MHz	-110 dBc/Hz, -112 dBc/Hz (Typ.)



Tracking Generator Specifications

Output frequency			
Model	UTS3084A	UTS3060A	UTS3036A
Range	100 kHz to 6 GHz	100 kHz to 6 GHz	100 kHz to 3.6 GHz
Frequency resolution	10 Hz		
Output power level			
Range	-40 dBm to 0 dBm		
Resolution	0.5 dB		
Output flatness	Relative to 50 MHz ± 3 dB		
Maximum safe reverse input level			
Average total Power	30 dBm		
AC coupling	± 50 VDC		

Vector Network Analyzer

Measurement Settings			
Model	UTS3084A	UTS3060A	UTS3036A
Frequency Range	100 kHz to 6 GHz	100 kHz to 6 GHz	100 kHz to 3.6 GHz
Measurement type	Reflection (S11), transmission (S21), DTF		
IF BW (Intermediate Frequency Bandwidth)	100 Hz to 1 MHz		
Measurement Point	101 to 10,001, default 201		
Trace Type	Trace memory, trace operation, refresh, trace average, max. hold, and min. hold		
Trace Format	Logarithmic amplitude, linear amplitude, phase, group delay, standing-wave ratio (SWR), real part, imaginary part, extended phase, and positive phase; Smith chart (linear/phase, logarithm/phase, real part/ imaginary part, R+jx, and G+jb); Polar coordinate diagram (linear/phase, logarithm/phase, and real part/ imaginary part)		
Amplitude Scale	500 G to 500 G		
Amplitude Resolution	Logarithm: 0.5 ndB Linear: 0.01 μ		
Marker Number	10		

Mechanical Calibration Parts	UT-3009F, UT-3009M, Custom
Calibration Items	Open, Short, Load, Through
Port Output Power	0 dBm to -40 dBm (Nom.)
S21 Measurement	
Dynamic Range (Maximum Output Power)	S21, RBW=10 kHz, log mag, Average=50
	100 kHz to 20 MHz 65 dB (Nom.)
	20 MHz to 3 GHz 90 dB (Nom.)
	3 GHz to 6 GHz 65 dB (Nom.)
S11 Measurement	
Direction after Calibrated	S11, logarithmic amplitude, Average=50 >40 dB(Nom.)
Trace Noise (Maximum output Power)	10 kHz RBW, Log mag, Average=50,>10MHz 0.1 dB rms(Nom.)
	10 kHz RBW, Phase,>10 MHz, Zero Span 0.05 deg rms(Nom.)
DTF Measurement	
Trace Format	Linear amplitude, standing-wave ratio (SWR), logarithmic amplitude(DTF), linear amplitude(DTF), return loss(DTF)
Stop Distance	$1.5 \times 10^8 \times \text{Velocity Factor} \times (\text{Sweep point} - 1) / \text{Span}$
FFT Filter	Gaussian, Flattop, Rectangular, Hanning, Hamming
Velocity Factor	0.1 to 1

Real-time Spectrum Analyzer

Frequency and Time Accuracy	
Real-time Analyzer	10 MHz
Bandwidth	40 MHz (Option UTS3000A-B40)
Min. Signal Duration for 100% POI at the Full-Scale	Maximum Span, default window: Kaiser 6.72 μ s
Accuracy	6.68 μ s (Option UTS3000A-B40)
Detection Mode	Peak, negative peak, sample, and average
Number of Traces	12
RBW filter Type	Hanning, Blackman-harris, rectangle, flat top, Kaiser, Gaussian
Display Trace	Normal, Density, Spectrogram, PvT, PvT Spectrum, PvT Spectrogram, Powergram, Powergram Spectrogram
Resolution Bandwidth	Provides 6 RBW options for each window, except the rectangle window

Kaiser window			
Span	Min. bandwidth	Max. bandwidth	
40 MHz	101.2162 kHz	3.2427 MHz	
25 MHz	63.2601 kHz	2.0361 MHz	
10 MHz	25.304 kHz	810.6667 kHz	
1 MHz	2.5304 kHz	81.0667 kHz	
100 kHz	253.0405 Hz	8.1067 kHz	
Min. Acquisition Time	50 μ s (Normal spectrum)		
FFT Rate	299,437/s (Nom.)		
Number of Markers	10		
Amplitude Resolution	0.01 dB		
Frequency Point	799		
Amplitude			
Amplitude Flatness (Normal spectrum)	\pm 0.6 dB (Nom.)		
SFDR	< -60 dBc (Typ.)		
Probability Density Display			
Probability Range	0 to 100% (with a step of 0.1%)		
Min. Span	5 kHz		
Duration	32 ms to 10 s		
Spectrogram			
History Depth	10,000		
Dynamic Range Covered by Bitmap Color	200 dB		
PVT			
Min. Acquisition Time	62.422 μ s		
Max. Acquisition Time	100 s		
Trigger			
Trigger Source	Free run, external trigger, power (time), FMT		
Frequency Mask Template Trigger (FMT)			
Trigger Delay	0 s to 500 ms		
Mask Type	Upper, Lower, and Both		
Trigger Resolution	0.5 dB (Nom.)		
Trigger Criteria	Enter, Leave, Inside, Outside, Enter-Leave, Leave-Enter		

Analog Demodulation Analyzer (Option)

Demodulation		
Frequency Range	2 MHz to 8.4 GHz	
Carrier Power Accuracy	± 2 dB	
Input Power	-30 dBm to +20 dBm	Auto attenuation
Carrier Power Resolution	0.01 dBm	
AM		
Modulation Frequency	20 Hz to 100 kHz	
Accuracy	1Hz (Nom.)	Modulation frequency < 1 kHz
	<0.1% modulation frequency (Nom.)	Modulation frequency ≥ 1 kHz
Depth	5 to 95%	
Accuracy	$\pm 4\%$ (Nom.)	
FM		
Modulation Frequency	20 Hz to 100 kHz	
Accuracy	1Hz (Nom.)	Modulation frequency < 1 kHz
	<0.1% modulation frequency (Nom.)	Modulation frequency ≥ 1 kHz
Frequency offset	1 kHz to 400 kHz	
Accuracy	$\pm 4\%$ (Nom.)	
PM		
Modulation Frequency	20 Hz to 100 kHz	
Accuracy	1 Hz (Nom.)	Modulation frequency < 1 kHz
	<0.1% modulation frequency (Nom.)	Modulation frequency ≥ 1 kHz
Phase offset	0.2 to 6.28 rad	
Accuracy	$\pm 4\%$ (Nom.)	

Vector Signal Analyzer (Option)

Measurement Function	
Modulation Type	ASK: 2ASK, 4ASK, 8ASK, and 16ASK
	FSK: 2FSK, 4FSK, 8FSK, and 16FSK
	MSK: Type1, Type2

	PSK: BPSK, QPSK, OQPSK, and 8PSK
	BPSK, QPSK, 8BPSK; DQPSK, D8PSK, $\pi/4$ -DQPSK, $\pi/8$ -D8PSK, and OQPSK
	QAM: 16, 32, 64, 128, and 256
Measurement Symbol Length	10 to 4,096
Symbol Point /Over-damping Rate	4, 6, 8, 10, 12, 14, 16, 20
Rate	1k Sps to Analyzer Bandwidth /
Filter	
Measurement Filter Type	No Filter, RRC, Gaussian, EDGE, CDMA and Rectangular
Reference Filter Type	Raised Cosine, RRC, Gaussian, EDGE, CDMA, and Rectangular
Filter Length	2 to 128
Alpha/BT	0.05 to 1
Display	
Data	IQ measurement time domain, IQ measurement time
	IQ reference time domain, IQ reference frequency domain
	Symbol error statistics, error vector time domain, and error vector frequency domain
	Time domain, IQ amplitude error, and IQ phase error
Format	logarithmic amplitude, linear amplitude, real part, and imaginary part
	IQ diagram, constellation diagram, I (eye diagram), and Q (eye diagram)
	Phase diagram, Phase extension diagram, and phase tree-like diagram
Symbol Error Statistics	
PSK/DPSK/MSK/QAM	EVM (rms EVM, peak EVM), and Magnitude error
	Phase error, IQ offset, Carrier offset, and SNR Quadrature error
	Gain imbalance (not support for MSK)
ASK	ASK Error, ASK depth, and carrier offset
FSK	FSK Error, Magnitude error, FSK deviation, and carrier offset

I/Q Analyzer (Option)

Frequency

Frequency Range 50 Hz to 8.4 GHz

Resolution Bandwidth (Spectrum Measurement)

Range 1 Hz to 10 MHz

Window shape Flat top, Hanning, Gaussian, Blackman, Blackman Harris

Analyzer Bandwidth

Standard 100 Hz to 10 MHz

Option 100 Hz to 40 MHz (UTS3000A-B40)

Frequency Response for Medium Frequency (demodulation and FFT response related to the center frequency, 20°C to 30°C)

Center Frequency (GHz)	Span (MHz)	Max. error	RMS (Nom.)
≤ 3.0	≤ 10	± 0.4 dB	0.03 dB

Intermedium Frequency Phase Linear Degree (Average Phase Linearity Offset, Nom.)

Center Frequency (GHz)	Span (MHz)	Peak-to-peak	RMS (Nom.)
≤3.0	≤10	0.5°	0.2°
3.0 < f ≤ 7.5	≤10	0.5°	0.4°

Data Acquisition (standard 40 MHz intermediate frequency path) Time Recording Length

IQ Analyzer	8,000,000 IQ sampling pairs
Sampling Rate	102.4 MSa/s
ADC Resolution	14 bits

EMI (Option)

EMI Resolution Bandwidth

Resolution Bandwidth (-6dB) 200 Hz, 9 kHz, 120 kHz, and 1 MHz

Resolution Bandwidth <5% (Nom.)
Uncertainty

EMI Detector

EMI Detector Peak, Negative, Quasi Peak, EMI Average, Average

EMI Main Functions

Main Functions	EMI measurement standard: CISPR
	View: Scan table, Meter, Signal table
	Meter control
	Avg settings
	Limit: AS-NZS, Bell Core, DEF-STAN, DO-160, EN, FCC, GB9254, MIL-461, VCCI and Custom
	Signal table settings
	Scan table settings
	Scan Sequence: Scan, Search, Scan-Search-Meas, Scan-Search, Search-Meas, Measure
	Sig Detector
	Output port

Phase Noise (Option)

Measurement parameters			
Mode	UTS3084A	UTS3060A	UTS3036A
Frequency range	100 kHz to 8.4 GHz	100 kHz to 6 GHz	100 kHz to 3.6 GHz
Min offset frequency	10 Hz		
Max offset frequency	Max measurement frequency - Measure signal frequency		
Measurement function			
View	Monitor, Spot Frequency, Log Plot, IQ Waveform		
Measurement Type	Phase Noise, DANL Floor		
Marker Function	Noise Degree, Noise Radian, Noise Jitter, Noise dBc, Residual FM (Weighted Integ), Averaged Noise Density		

Advanced Measurement (Option)

Power Measurement	
Channel Power	Channel power, power spectral density
Adjacent Channel Power (ACP)	Main channel power, lower power/ power ratio, higher power/ power ratio
Occupied Bandwidth (OBW)	Occupied bandwidth, total power, transmit frequency error
Time Domain Power	Zero span time integrated power
Carrier Noise Ratio (CNR)	Carrier power, noise power, carrier noise ratio

Non-Linear Measurement

Third-order Inter Modulation (TOI)	Based on dual-tone peak search
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Harmonic Measurement	Max. harmonic 10
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Spectrum Monitor

Spectrogram

Interface and Display

Common Interface

RF Input (Front Panel)	50 Ω , N-type female connector, (nom.)
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Tracking Generator (Front Panel)	50 Ω , N-type female connector, (nom.)
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10 MHz Reference Input	10 MHz, > 0 dBm, 50 Ω , BNC-type connector, (nom.)
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10 MHz Reference Output	10 MHz, -5dBm to +10 dBm, 50 Ω , BNC-type connector, (nom.)
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External Trigger Input	TTL, BNC-type connector
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HDMI	HDMI 1.4 display port
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USB to Host	USB-A
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USB to Device	USB-B
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LAN	LAN (VXI-11), 10/100/1000 Base, RJ-45
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Audio Interface	3.5 mm
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Remote Control

Remote Control Interface	LAN, USB-TMC
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Remote Control Capability	SCPI: USB-TMC, Socket, and VXI-11; Web Browser, Labview, and NI-AX; Device Manager (V2.5.0 and higher)
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Display Screen

Display Screen	10.1-inch multi-touch HD screen
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Display Resolution	1280×800, RGB Vertical pixel
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General Specification

Specification		
Power Voltage	100 to 240 VAC (fluctuation:± 10%)	100 to 120 VAC (fluctuation: ± 10%)
Frequency	50/60 Hz	400 Hz
Operational Environment		
Temperature Range	Operating: 0°C to +40°C Non-operating: -20°C to +60°C	
Cooling method	Fan-forced cooling	
Humidity Range	Operating: Below +35°C, ≤ 90% RH.; Non-operating: +35°C to +40°C, ≤ 60% RH.	
Altitude	Operating: Below 3000 meters; Non-operating: Below 15, 000 meters	
Pollution Degree	2	
Operating Environment	Indoor	
Machinery Specification		
Dimensions	378 mm × 218 mm× 120 mm (W×H×D)	
Weight	4.96 kg	
Calibration Cycle	One year	
Regulation and Compliance		
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
(ESD) 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	3 V/m (80 MHz to 1 GHz) ; 1 V/m (1.4 GHz to 6 GHz)
(EFT) Electrical Fast Transient burst (EFT)	IEC 61000-4-4/EN 61000-4-4	±1 kV (AC input port)
Surge	IEC 61000-4-5/EN 61000-4-5	±0.5 kV (Live line to zero line) ±1 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	IEC 61000-4-11/EN 61000-4-11	Voltage dip:

interruptions	0% UT during 0.5 cycle
	0% UT during 1 cycle
	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
 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	Order No.
Models	Signal Spectrum Analyzer, 9 kHz to 3.6 GHz	UTS3036A
	Signal Spectrum Analyzer, 9 kHz to 6.0 GHz	UTS3060A
	Signal Spectrum Analyzer, 9 kHz to 8.4 GHz	UTS3084A
Standard	Power cable ×1	
Accessories	USB data cable ×1	UT-D14
Options		
Options	Advanced Measurement	UTS3000A-AMK
	EMI Measurement	UTS3000A-EMI
	Analog Demodulation Analyzer	UTS3000A-AMA
	Vector Signal Analyzer	UTS3000A-VSA
	I/Q Analyzer	UTS3000A-I/Q
	Phase Noise Analysis	UTS3000A-PNM
Bandwidth Options	Analyzer Bandwidth B40	UTS3000A-B40
Calibration Kit	3.5mm SMA Female and 3.5mm SMA Male (Frequency Range: DC to 9 GHz)	UT-3009F/M
	3.5mm SMA Female (Frequency Range: DC to 9 GHz)	UT-3009F
	3.5mm SMA Male (Frequency Range: DC to 9 GHz)	UT-3009M
UT-CK01 Accessories Kit	SMAJ-NJ-0.7M DC-6G Cable ×1	UT-W02-6GHz
	NJ-NJ-0.7M DC-6G Cable ×1	UT-W01-6GHz
	Adaptor SMA-N-KJ-T DC-6 GHz ×2	UT-C01-6GHz

	Adaptor N-BNC-JK DC-4 GHz ×2	UT-C02-4GHz
	Antennae 2400 MHz-2500 MHz ×2	UTS-T01
	Antennae 824-960 MHz/1710-1990 MHz ×2	UTS-T02
	50Ω-SMA-SMB Cable ×1	UT-W03
	Adaptor SMA-N-KJ-T DC-6 GHz ×1	UT-C01
	Near field Probe, Frequency Range: 30 MHz to 3 GHz, Detection Range 10cm ×1	NFP-3G-P1
UTS-EMI01 Near field Probes Kit	Near field Probe, Frequency Range: 30 MHz to 3 GHz, Detection Range 3cm ×1	NFP-3G-P2
	Near field Probe, Frequency Range: 30 MHz to 2 GHz, Resolution 5mm ×1	NFP-2G-P3
	Near field Probe, Frequency Range: 30 MHz to 3 GHz, Resolution 2mm ×1	NFP-3G-P4

Note: For all main Products, Accessories, and Options, please order from your local UNI-T distributor.

Options ordering and installation

1. **Purchase Options:** Based on your requirements, please purchase the specified function Options from Uni-t Sales Personnel and provide the serial number of the instrument that needs the Option installed.
2. **Receive certificate:** You will receive the license certificate based on the address provided in the order.
3. **Register and obtain license:** Visit the Uni-t official website license activation session for registration. Use the license key and instrument serial number provided in the certificate to obtain the Option license code and license file.
4. **Install the Option:** Download the Option license file to the root directory of a USB storage device, and connect the USB storage device to the instrument. Once the USB storage device is recognized, the Option Install menu will be activated. Press this menu key to begin installing the Option.

Limited Warranty and Liability

UNI-T guarantees that the Instrument product is free from any defect in material and workmanship within three years from the purchase date. This warranty does not apply to damages caused by accident, negligence, misuse, modification, contamination, or improper handling. If you need a warranty service within the warranty period, please contact your seller directly. UNI-T will not be responsible for any special, indirect, incidental, or subsequent damage or loss caused by using this device. For the probes and accessories, the warranty period is one year. Visit instrument.uni-trend.com for full warranty information.



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