



USG5000M Series

RF Analog Signal Generators

Data Sheet

V 1.2
February, 2026

USG5000M Series RF Analog Signal Generators



Main Features

- Maximum frequency: 14 GHz/22 GHz
- Output frequency resolution: 0.001 Hz
- Level range: -135 dBm to 25 dBm
- High signal purity, phase noise: < -122 dBc/Hz @ 1 GHz, offset 20 kHz (Typ.)
- Amplitude accuracy: ≤ 0.7 dB (Typ.)
- Supports analog modulation: AM, FM, and Φ M
Various modulation modes: Internal, external, and internal + external
- Equipped with a highly stable clock source (OCXO)
- Built-in 50 MHz function/arbitrary waveform generator
- Power meter kit: Power measurement, power output control, and line loss calibration (Option)
- Pulse modulation: On-off ratio of up to 80 dB and customizable pulse trains (Option)
- Narrow pulse modulation: Minimum pulse width of 40 ns with resolution of 10 ns (Option)



USG5000M series RF Analog Signal Generators deliver high-quality signals, precise signal levels, and an ultra-wide output power range, meeting the demanding testing needs of wireless communication, aerospace, automotive electronics, industrial manufacturing, semiconductor, and research and education industries.



Wireless Communication



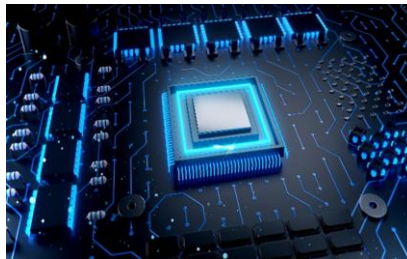
Aerospace



Industrial Manufacturing



Automotive Electronics



Semiconductor

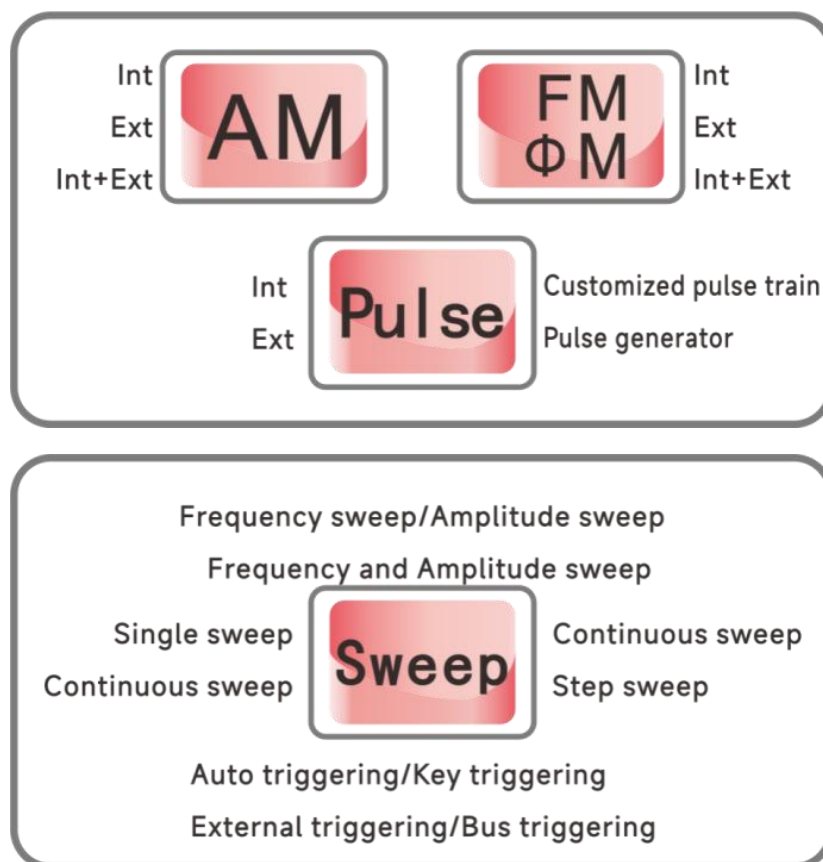


Research and Education

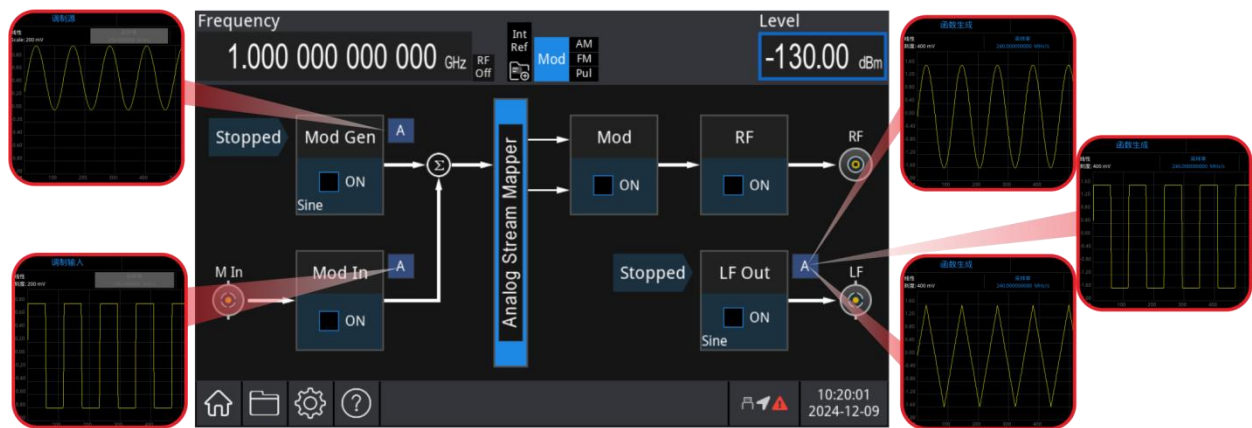
Technical Advantages

High Performance

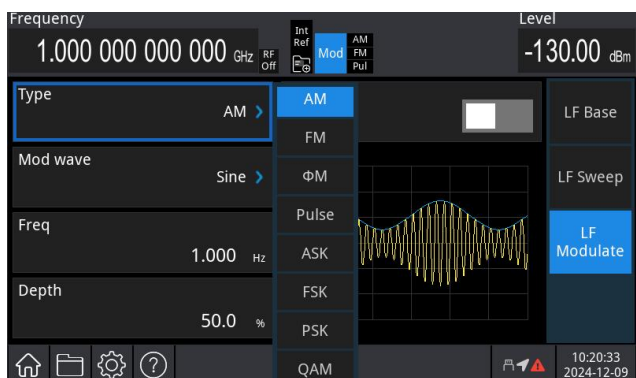
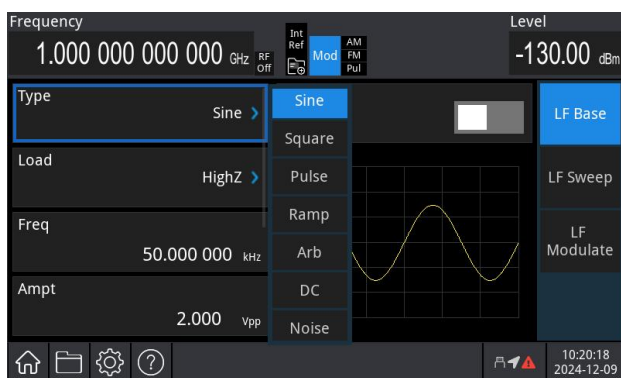
- **Precision Signal Output:** Delivering ultra-low phase noise and high-power output, the USG5000M series ensures consistent, reliable performance for advanced testing scenarios.
- **Flexible Modulation Capability:** Support for AM, FM, Φ M, and pulse modulation enables seamless integration into varied applications. Researchers can design and deploy custom pulse trains to meet specific experimental requirements.
- **Comprehensive Sweep Modes:** Frequency, amplitude, and list sweeps, with user-defined configurations, streamline testing processes for complex and dynamic environments.



USG5000M features an easy human-computer interface with a flat design. It allows intuitive display of both input and output waveforms, and users can switch between time-domain and frequency-domain waveforms seamlessly.

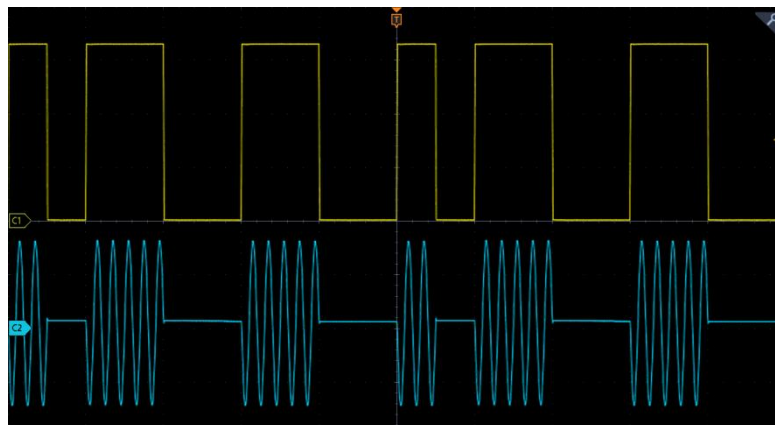


USG5000M is equipped with a function signal generator that supports standard waves, sweep, and modulation.



High-precision Pulse Generator (Option)

USG5000M series features a stable clock source and offers optional pulse modulation and a narrow pulse generator. It delivers a minimum pulse width of 40 ns with a resolution of 10 ns, meeting the requirements of automotive millimeter-wave radar systems.



Convenient Operation

USG5000M series features a touch screen and supports control via LAN, USB, and GPIB ports. Users can also remotely log in and control the instrument using Web Control software or send SCPI commands for automated control.

1. Touch Screen

USG5000M offers a human-computer interaction system with full touch control. All functions, except for the power switch, can be operated via the touch interface.

2. Power Meter Kit

The power meter kit connects to the instrument via the front panel USB port, enabling power measurement, power output control, and line loss calibration.

3. LAN and USB Port (Option GPIB)

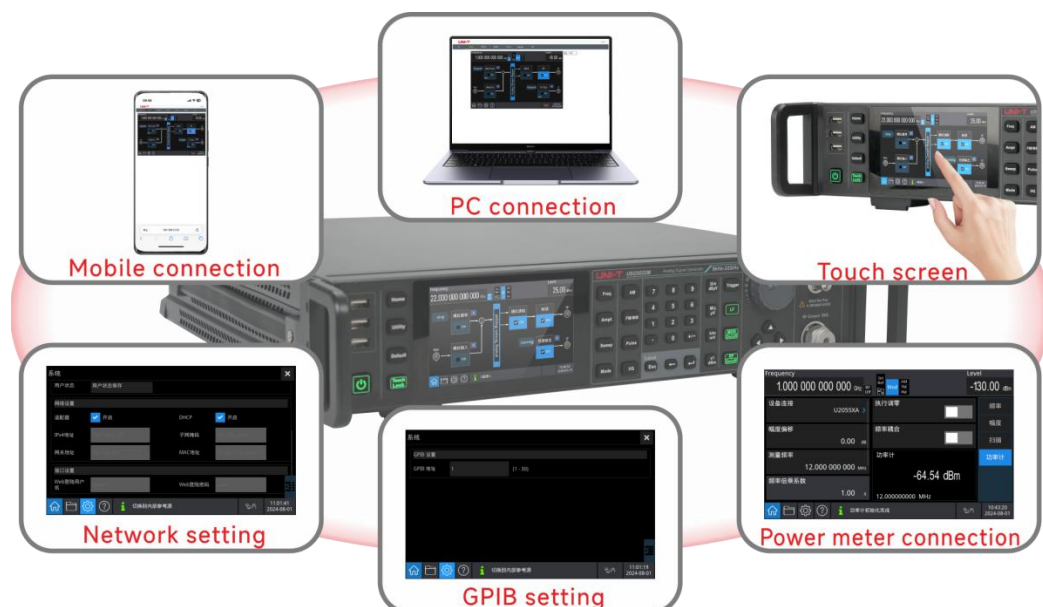
USG5000M can be controlled via the LAN, USB, and GPIB ports on the rear panel, either by sending commands directly or through host computer control. It supports the standard SCPI command set, enabling remote operation through these ports. Additionally, users can employ programming tools like Excel and LabVIEW to automate batch command execution, meeting diverse automated testing requirements.

4. Web Control

Users can access the Web Control page by entering the IP address of the USG5000M into a web browser's address bar. The page supports connections from both PC and mobile devices.

5. Device Manager (V2.5.0 and higher)

UNI-T offers free instrument management software for device control. By installing device manager on a PC, users can manage the instrument via LAN (VXI-11, Socket), USB Device (USB-TMC), or GPIB.

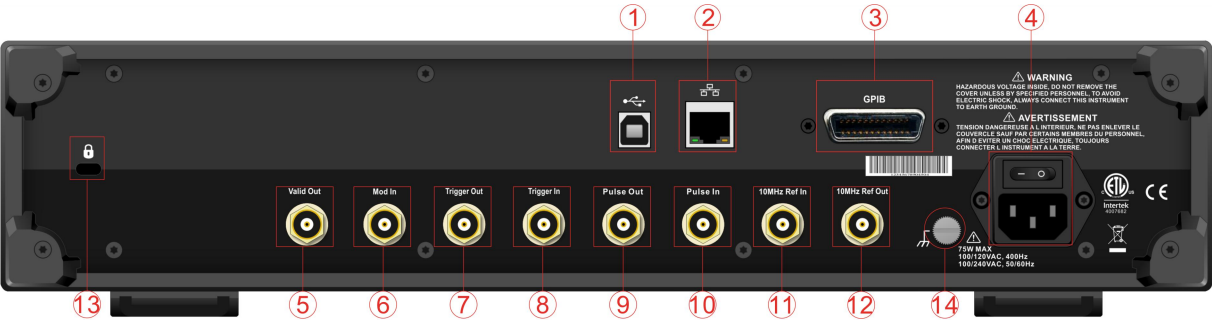


USG5000M Panel Overview



Front Panel

No.	Description	No.	Description
1	USB Host	2	Auxiliary function key
3	Touch display	4	Function menu keys
5	Numeric keypad	6	Output control key
7	Multi-function rotary knob Arrow keys	8	LF output terminal
9	RF output terminal	10	Power switch



Rear Panel

No.	Description	No.	Description
1	USB port	2	LAN port
3	GPIB port (Option)	4	Main power switch AC power supply
5	Signal Out	6	Mod In (Analog modulation input)
7	Trigger Out	8	Trigger In
9	Pulse Out (Pulse signal output)	10	Pulse In (Pulse signal input)
11	10MHz Ref In (Reference input)	12	10MHz Ref Out (Reference output)
13	Safety lock	14	Ground terminal

Technical Specification

Definitions:

- **"Technical Specification"** provides a detailed description of the parametric performance that is covered by the product warranty. Unless otherwise stated, these specifications are valid within a temperature range of 20°C to 30°C.
- **"Typical Value (Typ.)"** refers to performance data that is not covered in the product warranty. It represents the usual performance under standard conditions but does not guarantee adherence to specific performance metrics. When performance exceeds these typical values, 80% of the units are expected to demonstrate the specified performance with a 95% confidence level, within the 20°C to 30°C temperature range. It is important to note that measurement uncertainties are not included in the typical performance values.
- **"Nominal Value (Nom.)"** describes the expected mean or average performance of the product, which is useful in product applications but is not covered under the product warranty.

Conditions:

To meet these specifications, the instrument should first meet the following conditions.

- The instrument must be warmed up for at least 30min within the calibration period.
- If the instrument is stored in an environment that is within the allowable storage temperature range but outside the allowable operating temperature range, it must be allowed to acclimate to the allowable operating temperature range for at least two hours before being powered on.

Product Function and Model Comparison Table

	USG5014M	USG5014M-P	USG5022M-P
RF output	●	●	●
LF output	●	●	●
High stability clock source	●	●	●
Pulse modulation	○	○	○
Narrow pulse generator	○	○	○
Mechanical attenuator	×	●	●
Power meter kit	○	○	○
GPIB port	○	○	○
I/Q Mode	×	×	×

Note: ● standard ○ option × Not Available

Frequency Specifications

Frequency Range		
Model	USG5014M/USG5014M-P	USG5022M-P
Frequency range	9 kHz to 14 GHz	9 kHz to 22 GHz
Resolution	0.001 Hz	
Phase Offset	Step of 0.1°	
Frequency Band		
Band	Frequency range	N
1	9 kHz ≤ f ≤ 5 MHz	Digital synthesis
2	5 MHz < f ≤ 137.5 MHz	0.0625
3	137.5 MHz < f ≤ 250 MHz	0.125
4	250 MHz < f ≤ 468.75 MHz	0.03125
5	468.75 MHz < f < 937.5 MHz	0.0625
6	937.5 MHz ≤ f < 1875 MHz	0.125
7	1875 MHz ≤ f ≤ 3750 MHz	0.25
8	3750 MHz < f ≤ 7500 MHz	0.5
9	7500 MHz < f ≤ 15000 MHz	1
10	15000 MHz < f ≤ 22000 MHz	2
Note: N indicates a factor used to define certain specifications in this document.		
Internal Reference Frequency		
Accuracy	± (Time since last adjustment x Aging rate)	
	± Temperature effects	
	± Line voltage effects	
	± Calibration accuracy	
Oscillator aging rate	≤ ± 0.2 ppm/year	
Initial calibration accuracy	≤ ± 40 ppb	
Adjustment resolution	± 1 ppb	
Temperature effects	≤ ± 10 ppb	
Line voltage effects	≤ ± 10.0 ppb	
Reference Output		
Frequency	10 MHz	
Amplitude	≥ 0 dBm (Nom.), 50 Ω	
External Reference Input		
Input frequency	10 MHz	
Stability	Follows the stability of external reference input signal	

Sync range	± 10 ppm
Amplitude	0 dBm to +20 dBm (Nom.)
Impedance	50 Ω (Nom.)
Waveform	Sine wave, square wave

Sweep Mode (Frequency and Amplitude)

Operating mode	Step sweep, list sweep
Sweep range	Within instrument frequency range
Dwell time	100 μ s to 100 s
Number of points	2 to 65535 (Step sweep)
	1 to 500 (List sweep)
Step change	Linear or logarithmic
Triggering mode	Free-running, external, key, bus (LAN, USB, GPIB)

Frequency Switching Speed

The time elapsed from the receipt of the SCPI command or trigger signal until the amplitude stabilizes within 0.2 dB.

	Continuous Wave (CW) Mode
SCPI mode	≤ 40 ms
List/step sweep mode	≤ 40 ms

Level Specification

ALC (Automatic Level Control) Mode

USG5000M series includes three ALC operating modes.

ALC Auto: Automatically sets the optimum ALC mode based on the current operating state.

ALC On: When level control is in a closed-loop state, it is suitable for continuous wave (CW), frequency modulation (FM), and phase modulation (Φ M).

ALC S&H (Off): When frequency or amplitude changes, the level control is initially set to closed-loop. Then, the sampling control voltage is applied to retain the control voltage. When ALC is automatic, amplitude modulation, or pulse modulation can be operated in this state.

Output Parameter

Settable range	-135 dBm to + 25 dBm
Resolution	0.01 dB
Step attenuator (Option)	0 to 110 dB, step of 10 dB

Maximum Output Power

USG5014M

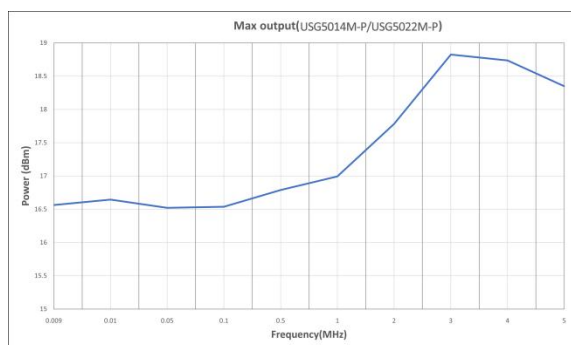
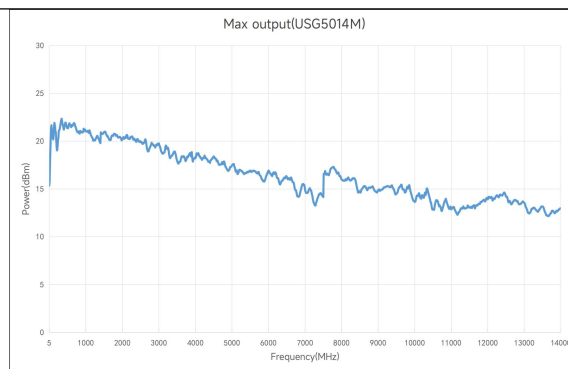
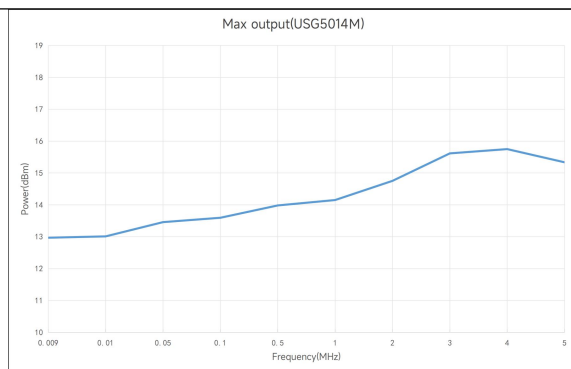
Frequency

9 kHz to 5MHz	+12 dBm
> 5 MHz to 250 MHz	+14 dBm
> 250 MHz to 6.5 GHz	+15 dBm
> 6.5 GHz to 10 GHz	+11 dBm
> 10 GHz to 12 GHz	+9 dBm
> 12 GHz to 14 GHz	+8 dBm

USG5014M-P/USG5022M-P

Frequency

9kHz to 5MHz	+16 dBm
> 5MHz to 250MHz	+18 dBm
> 250MHz to 3GHz	+22 dBm
> 3GHz to 14GHz	+17 dBm
> 14GHz to 20GHz	+15 dBm
> 20GHz to 22GHz	+12 dBm

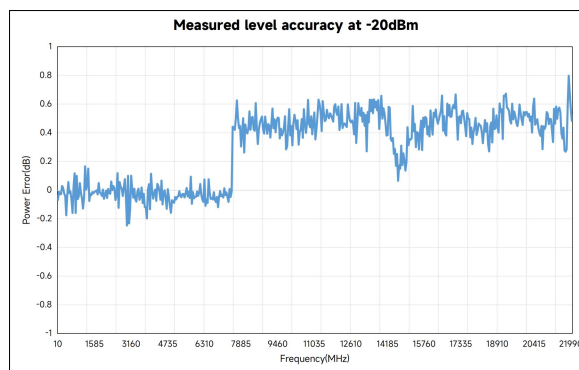
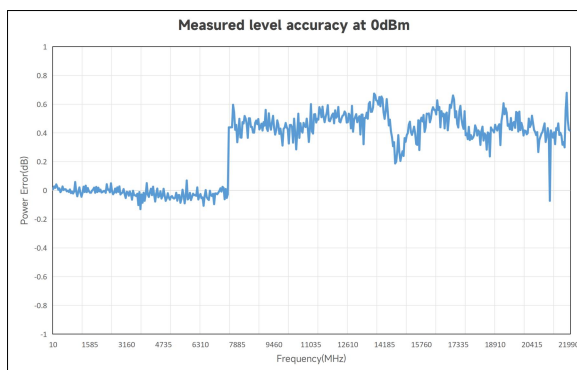


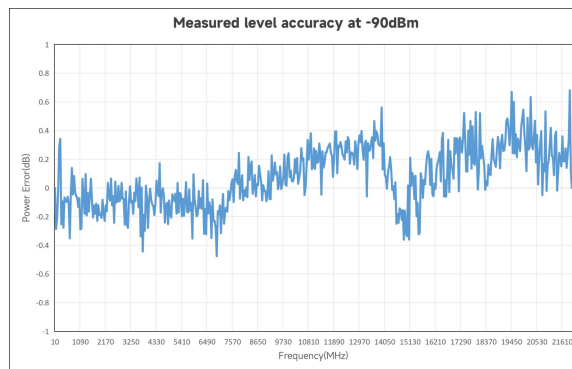
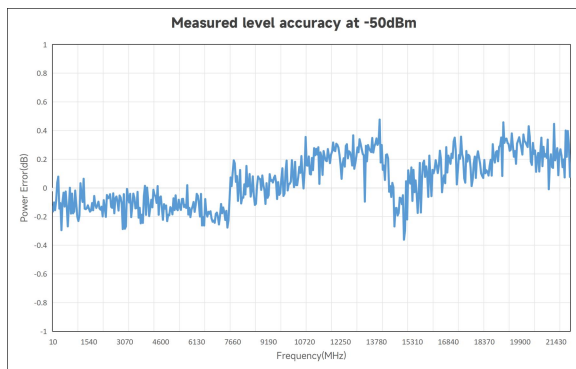
Absolute Level Accuracy in CW Mode (ALC on, Typ.)

Quoted specifications between 20 °C and 30 °C. For temperatures outside this range, absolute level accuracy decreased by 0.01 dB/°C.

Output power may drift up to 0.10 dB < 3 GHz and 0.15 dB > 3 GHz per g/kg change in absolute humidity (Nom.).

Range	+10 dBm to -20 dBm	< -20 dBm to > -110 dBm	-110 dBm to -130 dBm
9 kHz to 100 kHz	± 0.7 dB	± 0.7 dB	± 1.0 dB
> 100 kHz to 5MHz	± 0.7 dB	± 0.7 dB	± 1.0 dB
> 5 MHz to 3 GHz	± 0.7 dB	± 1.0 dB	± 1.2 dB
> 3 GHz to 6.5 GHz	± 0.7 dB	± 1.0 dB	± 1.5 dB
> 6.5 GHz to 20 GHz ¹	± 0.7 dB	± 1.0 dB	± 2.0 dB
> 20 GHz to 22 GHz	± 1.5 dB	± 1.5 dB	± 2.0 dB





1: USG5014M Range > 6.5 GHz to 14 GHz index range: +6 dBm to -20 dBm, index: ± 0.7 dB

SWR (Standing-wave Ratio) in CW Mode

Range	Attenuator State		
	Undamped	0 to 10dB	Above 20 dB
≤ 1.0 GHz	< 1.8: 1 (Nom.)	< 1.6: 1 (Nom.)	< 1.5: 1 (Nom.)
> 1.0 to 6.5 GHz	< 1.8: 1 (Nom.)	< 1.6: 1 (Nom.)	< 1.5: 1 (Nom.)
> 6.5 to 22 GHz	< 2.0: 1 (Nom.)	< 1.6: 1 (Nom.)	< 1.5: 1 (Nom.)

Maximum Reverse Power (Nom.)

< 1 GHz	0 dBm
> 1 GHz to 2 GHz	25 dBm
> 2 GHz to 22 GHz	25 dBm
Maximum DC voltage	0 VDC
Trip level	25 dBm

Amplitude Switching Speed

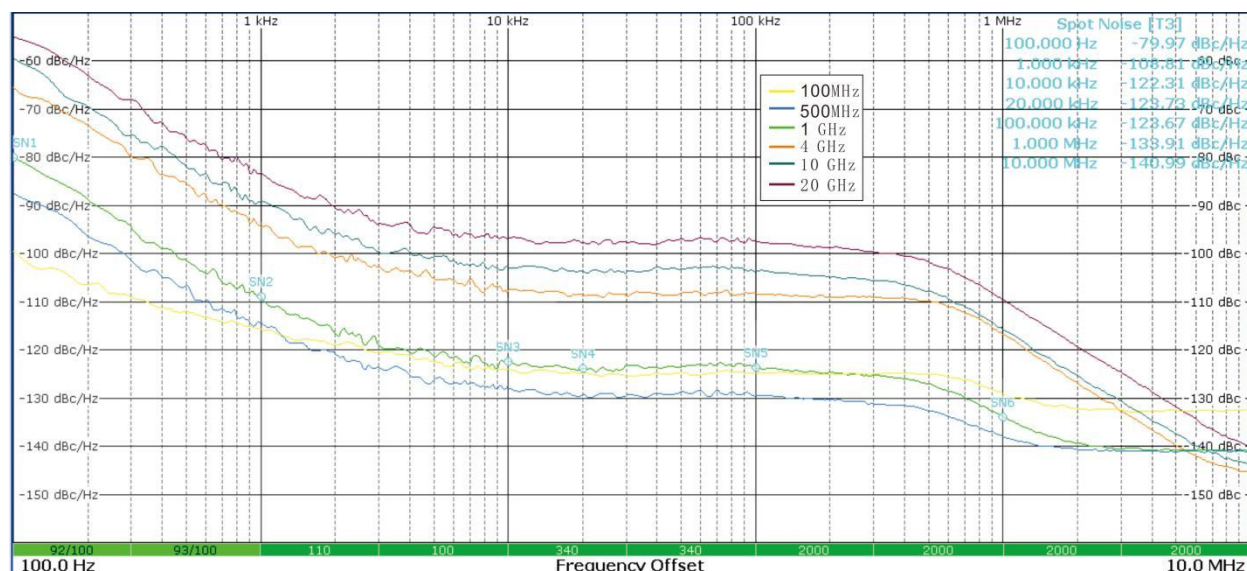
The time elapsed from the receipt of the SCPI command or trigger signal until the amplitude stabilizes within 0.2 dB.

	CW Mode
SCPI mode	≤ 40 ms
List/step sweep mode	≤ 40 ms

Spectral Purity Specifications

SSB (Single Side Band) Phase Noise [dBc/Hz, CW, at 20 kHz offset (Typ.)]

5 MHz to < 250 MHz	-125 dBc/Hz
500 MHz	-128 dBc/Hz
1 GHz	-122 dBc/Hz
4 GHz	-109 dBc/Hz
10 GHz	-102 dBc/Hz
20 GHz	-98 dBc/Hz



Residual FM (CW mode, 300 Hz to 3 kHz BW, CCITT, rms)

5 MHz to 22 GHz < $N \times 3$ Hz (measured value), see N value in frequency table

Residual AM (CW mode, 300 Hz to 3 kHz BW, rms, 0 dBm)

100 kHz to 22 GHz < 0.01% (measured value)

Harmonics (CW Mode)

Model	USG5022M-P	USG5014M-P	USG5014M
Range	Output Amplitude 0 dBm		
9 kHz to 250 MHz	≤ -40 dBc	≤ -40 dBc	≤ -40 dBc
> 250 MHz to 1 GHz	≤ -45 dBc	≤ -45 dBc	≤ -40 dBc
> 1 GHz to 7.5 GHz	≤ -40 dBc	≤ -40 dBc	≤ -40 dBc
> 7.5 GHz to 14 GHz	≤ -35 dBc	≤ -35 dBc	≤ -30 dBc
> 14 GHz to 22 GHz	≤ -35 dBc	---	---

Non-harmonics (CW Mode)

Range	> 10 kHz offset
9 kHz to < 5 MHz	-75 dBc (Nom.)
5 MHz to < 750 MHz	-60 dBc
750 MHz to < 7.5 GHz	-65 dBc
7.5 GHz to < 14 GHz	-60 dBc
14 GHz to < 22 GHz	-55 dBc

Sub-harmonics (CW Mode)

9 kHz to 15 GHz	None
15 GHz to 22 GHz	-70 dBc

Analog Modulation Specifications

Frequency Band

Band No.	Frequency range	N
1	$9 \text{ kHz} \leq f \leq 5 \text{ MHz}$	Digital synthesis
2	$5 \text{ MHz} < f \leq 137.5 \text{ MHz}$	0.0625
3	$137.5 \text{ MHz} < f \leq 250 \text{ MHz}$	0.125
4	$250 \text{ MHz} < f \leq 468.75 \text{ MHz}$	0.03125
5	$468.75 \text{ MHz} < f < 937.5 \text{ MHz}$	0.0625
6	$937.5 \text{ MHz} \leq f < 1875 \text{ MHz}$	0.125
7	$1875 \text{ MHz} \leq f \leq 3750 \text{ MHz}$	0.25
8	$3750 \text{ MHz} < f \leq 7500 \text{ MHz}$	0.5
9	$7500 \text{ MHz} < f \leq 15000 \text{ MHz}$	1
10	$15000 \text{ MHz} < f \leq 22000 \text{ MHz}$	2

FM (Frequency Modulation)

Modulation source	Internal, external, internal + external	
Maximum offset	$N \times 10 \text{ MHz (Nom.)}$, see N value mentioned above	
Resolution	0.001 Hz	
Offset accuracy	$< \pm 2\% + 20 \text{ Hz}$ (1 kHz rate, offset is $N \times 50 \text{ kHz}$)	
Modulation frequency respond	$< 3 \text{ dB}$	0.001 Hz to 50 kHz (Nom.)
Carrier frequency accuracy	$< \pm 0.2\% \times \text{set offset} + (N \times 1 \text{ Hz})$	
THD (Total harmonic distortion)	$< 0.4\%$ (1 kHz rate, offset is $N \times 50 \text{ kHz}$)	
FM external modulation input	Sensitivity	+ 1 V peak for offset indication (Nom.)
	Input impedance	50 Ω
	Path	FM summed internally for composite modulation

PM (Phase Modulation)

Modulation source	Internal, external, internal + external	
Maximum offset	$N \times 5 \text{ rad (Nom.)}$	
Modulation frequency respond	3 dB bandwidth	0.001 Hz to 50 kHz (Nom.)
Resolution	0.01 rad/0.1 deg	
Offset accuracy	$< + 0.5\% + 0.01 \text{ rad}$ [1 kHz rate (Typ.)]	
THD	$< 0.2\%$ [1 kHz rate (Typ.)]	

Φ M external modulation input	Sensitivity	+ 1 V peak for offset indication (Nom.)
	Input impedance	50 Ω (Nom.)
	Path	Φ M summed internally for composite modulation

AM (Amplitude Modulation)

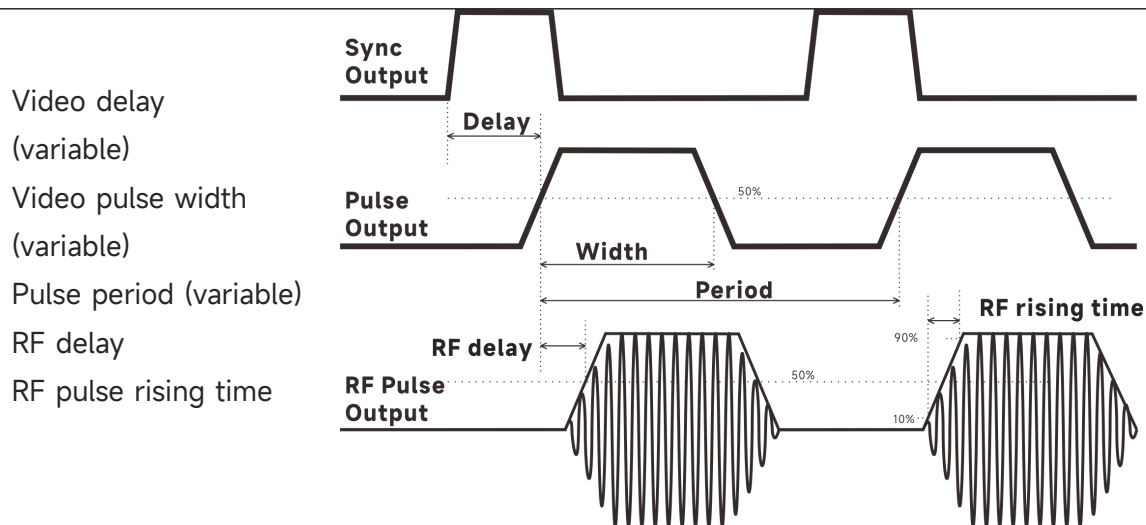
Modulation source	Internal, external, internal + external	
Modulation depth	0% to 100%	
Resolution	0.1%	
AM depth error 1 kHz frequency sum < 80% modulation depth	$f < 5$ MHz	< 1.5% of set value+1% (Typ., 0.5% + 1% of set value)
	$5 \text{ MHz} \leq f \leq 2 \text{ GHz}$	< 3%+1% of set value
	$2 \text{ GHz} < f < 3 \text{ GHz}$	< 5%+1% of set value (Typ., 3%+1% of set value)
	$3 \text{ GHz} < f < 7.5 \text{ GHz}$	(Typ., 4%+1% of set value)
	$7.5 \text{ GHz} < f < 22 \text{ GHz}$	(Typ., 4%+1% of set value)
THD (1 kHz frequency)	$f < 5$ MHz	30% depth, < 0.25% (Typ.) 80% depth, < 0.5% (Typ.)
	$5 \text{ MHz} \leq f < 22 \text{ GHz}$	30% depth, < 3% 80% depth, < 3%
Modulation frequency respond	30% depth, 3 dB bandwidth	0.001 Hz to 50 kHz
AM external modulation input	Sensitivity	+ 1 V peak for offset indication (Nom.)
	Input impedance	50 Ω (Nom.)
	Path	AM summed internally for composite modulation

AM specifications apply 10 dB below maximum specified power from 20 to 30 °C.

Pulse Modulation (Option)

Mode	Free-Run, Square, Ext Triggered, Adjustable Doublet, Ext Trigger Doublet, Gated, Ext Pulse, Pulse Train	
Modulation source	Internal, external	
On-off ratio	$1 \text{ MHz} < f \leq 6.5 \text{ GHz}$	$\geq 80 \text{ dBc}$ (Typ.)
	$6.5 \text{ MHz} < f \leq 22 \text{ GHz}$	$\geq 70 \text{ dBc}$ (Typ.)
Rising/falling time (10%/90%)	< 20 ns (Typ.)	
Minimum pulse width	100 μ s to (Pulse period – 1 μ s)	
Pulse period	Pulse width +1 μ s to 42 s	
Resolution	1 μ s	

Adjustable delay	Free-run: 0 to (Period – Pulse width – 1 μ s)
	Trigger: 1 μ s to (Maximum pulse period – 1 μ s)
Level accuracy	< $\pm$ 0.5 dB (Relative to CW)
Width compression	$\leq$ 10 ns (Relative to RF width of pulse output)
Video feed-through	$\leq$ 50 mV
External pulse input delay	500 ns (Nom.), external input to pulse output terminal
Radio-frequency delay	50 ns (Nom.), pulse input to RF output
Input level	+ 1 V _{peak} = RF on 50 Ω (Nom.)



Narrow Pulse Generator (Option)

Pulse period	80 ns to 42 s
Pulse width	40 ns to (Pulse period – 40 ns)
Resolution	10 ns
Adjustable delay	Free-running: 0 to (Period – Pulse width – 40 ns)
	Trigger: 40 ns to (Maximum pulse period – 40 ns)

Simultaneous and Composite Modulation

Simultaneous modulation	All modulation types (FM, AM, Φ M, and PM) may be simultaneously enabled, except that FM and phase modulation cannot be combined. Additionally, two modulation types cannot be simultaneously generated using the same modulation source.
Composite modulation	AM, FM, and Φ M each consist of two modulation paths which are summed internally for composite modulation; modulation can be any combination of internal or external sources.

Modulation Type	AM	FM	Φ M	PM
AM	---	●	●	●
FM	●	---	x	●
Φ M	●	x	---	●

PM	●	●	●	---
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● Compatible; × Incompatible

External Modulation Input

Mod In	AM, FM, ΦM (50Ω)
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Pulse Out/In	PM (50Ω)
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Internal Function Generator (LF)

Waveform	Sine, Square, Pulse, Triangular, Arbitrary, DC, Noise
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	Sine wave	0.001 Hz to 50 MHz
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Frequency range	Square, pulse, arbitrary waves	0.001 Hz to 15 MHz
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	Triangular wave	0.001 Hz to 3 MHz
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Frequency resolution	0.001 Hz (Nom.)
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Frequency accuracy	Same as RF reference source (Nom.)
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LF output amplitude	1 mVpp to 2 Vpp, 50 Ω
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Accuracy	Typ.	
	(1 kHz sine wave, 0 V offset, > 10 mVpp)	$\pm (1\% \text{ of set value} + 1 \text{ mVpp})$

DC offset accuracy	$\pm 1\% \text{ of offset set value} \pm 0.5\% \pm 2 \text{ mV of amplitude set value}$
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Flatness	Typ. (1 kHz sine wave, 1 Vpp)	$\leq 100 \text{ kHz: } \pm 0.2 \text{ dB}$
		$\leq 20 \text{ MHz: } \pm 0.4 \text{ dB}$
		$\leq 40 \text{ MHz: } \pm 0.6 \text{ dB}$
		$\leq 50 \text{ MHz: } \pm 0.8 \text{ dB}$

LF Frequency Sweep

Sweep mode	Linear, logarithmic, step
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Sweep shape	Positive/negative sawtooth, positive/negative triangular
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Sweep time	1 ms to 500 s
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Sweep frequency range	0.001 Hz to 50 MHz
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Trigger input	Auto, key trigger, external trigger, bus trigger
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Trigger output	Off, rising edge, falling edge
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LF Modulation

Modulation mode	AM, FM, ΦM, Pulse, ASK, FSK, PSK, QAM
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Modulation frequency	0.002 Hz to 5 MHz
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Modulation wave	Sine, square, triangular, arbitrary waves
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Carrier type	Sine, square, pulse, triangular, arbitrary waves
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AM depth	0.00% to 120.00%
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FM frequency offset	DC to 25 MHz
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Φ M phase Offset	0.00° to 360.00°
Pulse duty ratio	0.00 to 100.00%
Data pattern	PN7, PN9, PN11, PN17, PN19, PN21, PN23, PN25
ASK mode	2ASK
FSK mode	2FSK, 4FSK
PSK mode	2PSK, 4PSK
QAM mode	QAM4, QAM8, QAM16, QAM32, QAM64, QAM128, QAM256

Input and Output Terminal

Connector on Front Panel

RF output	NMD 2.92, 50 Ω
Internal function generator LF output	BNC female header, 50 Ω

Connector on Rear Panel

Trigger In	BNC female header, high resistance (Nom.), TTL (Supports multiple level input)
Trigger Out	BNC female header, LVTTTL
Mod In (Analog modulation input)	BNC female header, 50 Ω (Nom.), ± 1 V
Pulse input	BNC female header, 50 Ω (Nom.), (Input amplitude > 1 V)
Pulse output	BNC female header, 50 Ω (Nom.), (Input amplitude > 1 V)
10MHz Ref In	BNC female header, 50 Ω (Nom.), 0 dBm to +20 dBm
10MHz Ref Out	BNC female header, 50 Ω (Nom.), > 0 dBm
Signal Out	BNC female header, LVTTTL

Communication Port

USB-HOST	USB-A 2.0
USB-DEVICE	USB-B 2.0
LAN	LAN (VXI-11,10/100/1000 Base, RJ-45)
GPIB	GPIB IEEE-488.2

General Specifications

Power Supply

Power voltage	100 to 240 VAC (Fluctuation: $\pm 10\%$), 50 Hz/60 Hz 100 to 120 VAC (Fluctuation: $\pm 10\%$) , 400 Hz
Power consumption	Less than 75 W

Display screen

Display type	5-inch capacitive multi-touch panel
Display resolution	800×480

Environmental Requirements

Temperature range	Operating: 0°C to +40°C
	Non-operating: -20°C to +60°C
Cooling	Fan-forced cooling
Humidity	Below +35°C: ≤ 90% RH.
	+35°C to +40°C: ≤ 60% RH.
Altitude	Operating: Below 2,000 meters
	Non-operating: Below 15,000 meters
Pollution degree	2
Operating environment	For indoor use only

Machine Specifications

Dimension	449mm×100mm×474mm (H×W×L)
	426mm×88mm×400mm (H×W×L)
	excluding handles, feet, pads, and side straps
Weight	< 20 kg
Calibration period	One year

Regulatory Requirement

Electromagnetic compatibility	Compliant with EMC (2014/30/EU); compliant with or superior to IEC 61326-1:2021/EN61326-1:2021, IEC 61326-2-1:2021/EN61326-2-1:2021	
Conducted emission	CISPR 11/EN 55011	CLASS B group 1, 150 kHz-30 MHz
radiation disturbance	CISPR 11/EN 55011	CLASS B group 1, 30 MHz-1 GHz
Electro-static 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)
Electrical fast transient (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 (Live/zero line to ground)
RF continuous conduction immunity	IEC 61000-4-6/EN 61000-4-6	3 V, 0.15-80 MHz
Voltage dips and short	IEC 61000-4-11/EN 61000-	Voltage dips:

interruptions	4-11	0% UT during 0.5 cycle 0% UT during 1 cycle 70% UT during 25/30 cycles Short interruptions: 0% UT during 250/300 cycles
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Safety Regulation

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

Order Information and Warranty Period

	Description	Order No.
Model	RF signal generator, frequency 9 kHz to 14 GHz	USG5014M
	RF signal generator, frequency 9 kHz to 14 GHz Mechanical attenuator	USG5014M-P
	RF signal generator, frequency 9 kHz to 22 GHz Mechanical attenuator	USG5022M-P
	Compliant with the host country's standards Power cord x1	
Accessory	USB data cable x1	UT-D14
	2.92-KKG connector x1	UT-C04-40GHz
Accessory (Option)	UT-CK02	UT-W03-40GHz-2.92J Rf cable x1 2.92-KKG connector x2 UT-C03-18GHz Rf adapter SMA-N x1
		UT-W03-40GHz
		UT-C04-40GHz
Option	Pulse modulation	Pulse modulation Narrow pulse generator
		USG5000-PM USG5000-PG
	Power meter kit	USG5000-PK
	GPIO port	USG5000-GPIB

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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<https://instruments.uni-trend.com/ContactForm>

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