



# Data Sheet

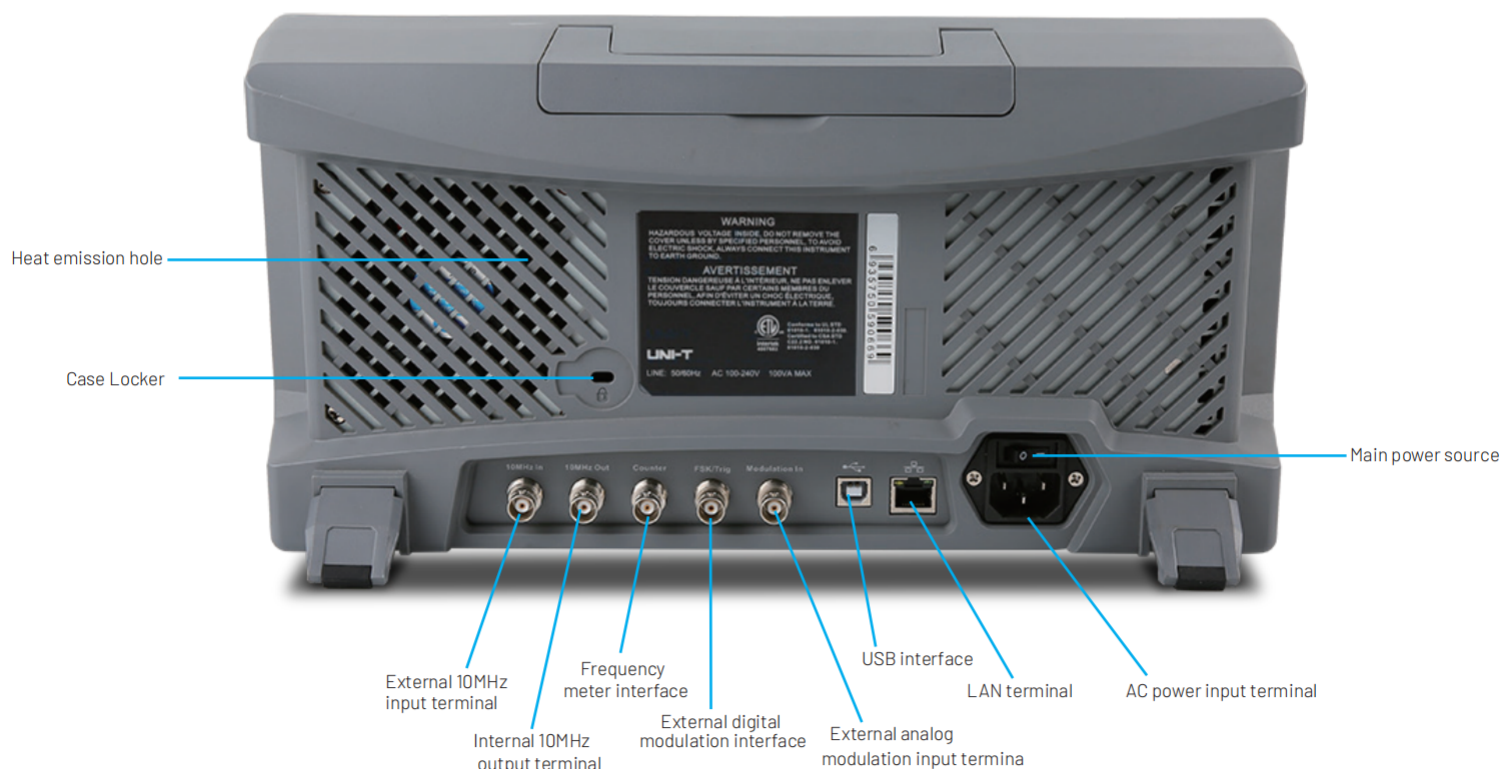
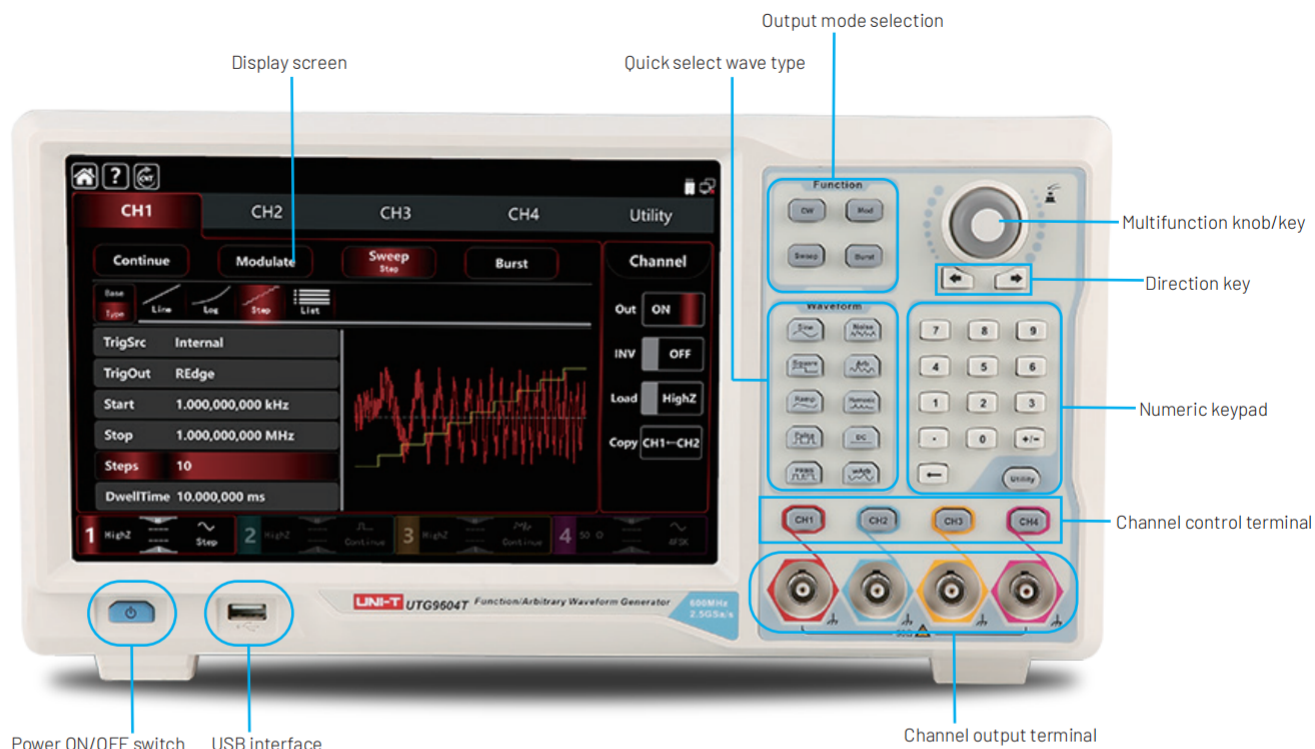
## UTG9000T Series Function/Arbitrary Waveform Generator



## Main Features

- Standard four channel with separate output channel mode
- Nine basic waves: sine wave, square wave, ramp wave, pulse wave, harmonic wave, noise, PRBS (pseudo random binary sequence), DC, arbitrary wave
- The maximum sampling rate 2.5GSa/s, the vertical resolution 16bits/14bits
- Adjustable noise bandwidth
- Sine wave output: 600MHz/500MHz/350MHz, full band: 1 $\mu$ Hz resolution
- Square wave output: 200MHz/160MHz/120MHz, the minimum edge time: within 1.5ns, adjustable duty ratio
- Pulse wave output: 200MHz/160MHz/120MHz, wide dynamic range high precise adjustable rising/falling edge time, adjustable duty ratio
- It can output phase and amplitude, independent and adjustable 2~16 harmonic wave
- The maximum output swing: 20Vpp
- It can output arbitrary wave 8pts~64Mpts, support point-by-point. More than 200 types of nonvolatile digital arbitrary wave storage
- It can store 16GB (optional) or 20MB arbitrary file (.bsv or.csv), the instrument status file
- It can read arbitrary wave file (.bsv or.csv) and the instrument file storage in USB
- Abundant modulation types: AM, FM, PM, DSB-AM, QAM, ASK, FSK, 3FSK, 4FSK, PSK, BPSK, QPSK, OSK, PWM, SUM
- Linear, logarithmic, list frequency, stepping sweep
- Support frequency sweep and burst (pulse string) output
- Digital protocol output: SPI、IIC、UART
- SNR (signal to noise ratio) one-click output
- Four channels can be internal/external modulating, internal/external/manual respectively or at the same time
- Hardware frequency counter: 800MHz, AC/DC coupling
- Powerful upper-computer software and arbitrary editor
- 10.1-inch capacitive touch screen, 1280\*800 resolution
- Standard configuration interface: USB Host, USB Device, LAN, independent input and output of 10MHz clock source
- Usability multifunction knob and numeric keypad

# Oscilloscope Panel

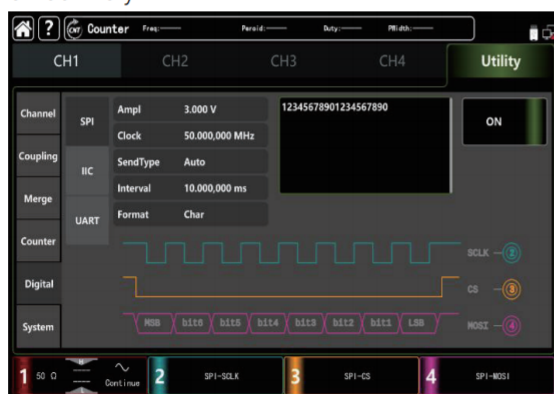


# Product Introduction

This product has DDS (direct digital frequency synthesis) function, it can present high precision, stable, pure and low distortion signal. Plus, it can also offer wave in high frequency with quick rising edge and falling edge. It is a high-performance, multifunction four channel arbitrary function generator. Usability touch screen, superior technical index and humanity graph display design for your better work performance. This product is a multi-purpose generator to meet your current and future testing needs.

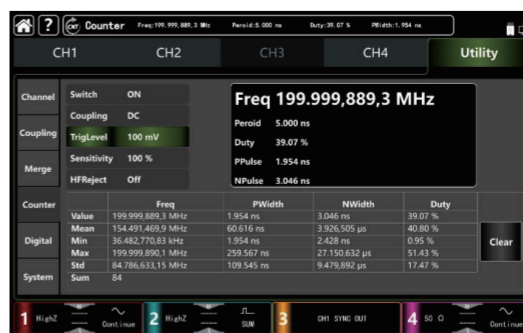
## Digital Protocol Output

UTG9000T series has three serial standard protocol output SPI, IIC, UART, compile the corresponding parameter can make serial signal waveform of protocol. This function is to test the protocol interface, to provide input signal for interface. Interface measurement operating more specific and effectively.



## Frequency Meter

UTG9000T series has built-in frequency meter, to be tested frequency signal only needs to connect with "counter" on the back panel, then will get the result.



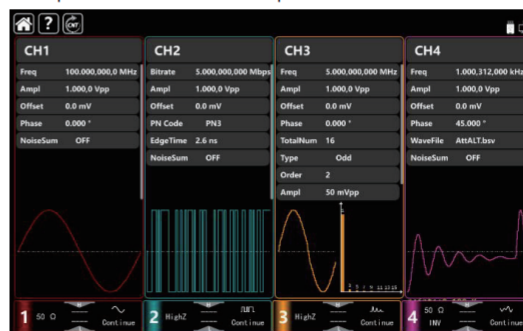
## Channel Merging

UTG9000T series can merge CH1 with CH2, CH3 merge with CH4, great real-time and true superposition features to presents complicated waveform.



## Four-channel Sync Display

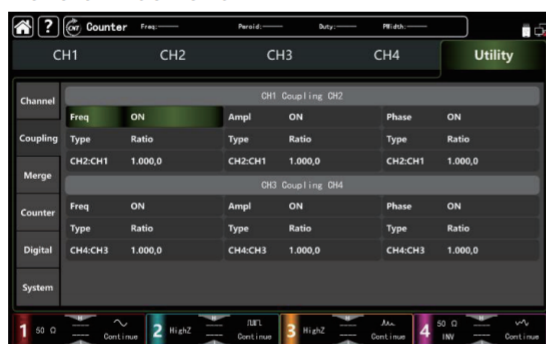
UTG9000T series has four channels, Ch1 and CH2 are the main channels, CH3 and CH4 is belong to secondary channel. User can switch to display signal parameters of four channel on the same screen, it's easy to operate and record parameters.



## Channel Coupling

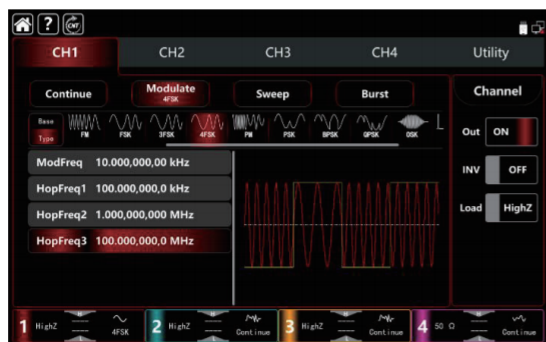
CH1 and CH2, CH3 and CH4 has channel coupling function. Turn on the function when another channel needs the same or relative signal waveform.

UTG9000T series has three coupling mode to meet different requirements. Channel coupling is quickly to send parameter to the other channel, it meets sync switch waveform demand.



## Multiple modulation mode

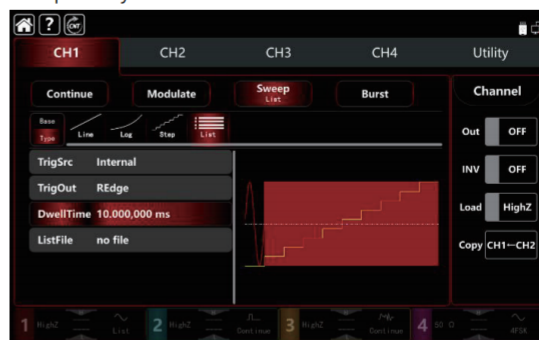
Support multiple analog and digital modulation, which is AM, FM, PM, DSBAM, QAM, ASK, FSK, 3FSK, 4FSK, PSK, BPSK, QPSK, OSK, PWM, SUM, it has internal and external modulating signal source. A variety of modulation signals to meet waveform generation needs from radio to TV to mobile network.



## Sweep frequency

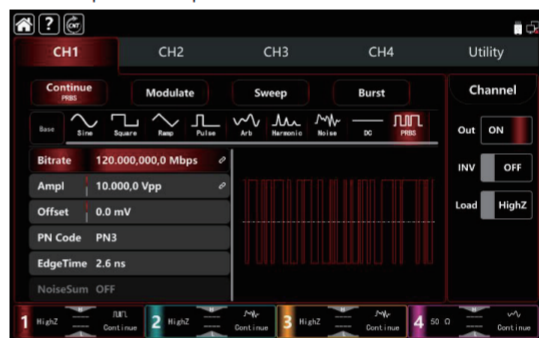
Except linear and logarithm frequency, it adds two modes stepping and list. Set frequency step and time interval between

each frequency point, follow stepping frequency to get waveform of stepping sweep; preset a list, output time interval by frequency point in list to get frequency waveform. User can freely compile frequency waveform as own needs.



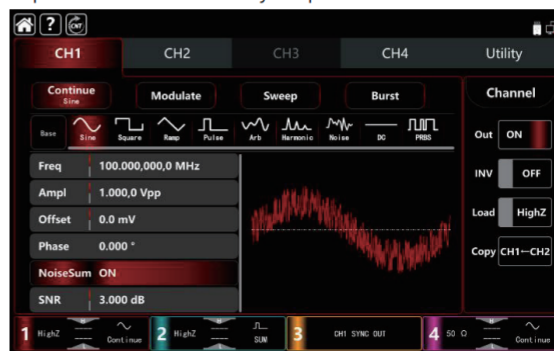
## PRBS

UTG9000T series has PRBS wave, which is PN3, PN5, PN7, PN9, PN11, PN13, PN15, PN17, PN21, PN23, PN25, PN27, PN29, PN31, PN33. It's for product performance measurement.



## One-button SNR

One-button SNR on continuous waveform. User can set SNR parameter according to your own needs. It's convenient to test input tolerance ability of product.



## Arbitrary Wave

UTG9000T series stores over 200 types of standard waveforms in nonvolatile memory. Upper-computer software can create and compile arbitrary wave, use USB interface on the front panel to read arbitrary wave data file in USB. It provides a lot of flexible arbitrary wave for testing standard waveform of medical, biological, mathematical and other fields.



## Quick Model Selection

| Parameter \ Model    | UTG9604T                                                                     |          | UTG9504T    |          | UTG9354T    |          |
|----------------------|------------------------------------------------------------------------------|----------|-------------|----------|-------------|----------|
| Channel              | CH1/CH2                                                                      | CH3/CH4  | CH1/CH2     | CH3/CH4  | CH1/CH2     | CH3/CH4  |
| Maximum frequency    | 600MHz                                                                       | 200MHz   | 500MHz      | 200MHz   | 350MHz      | 160MHz   |
| Sampling rate        | 2.5GSa/s                                                                     | 625MSa/s | 2.5GSa/s    | 625MSa/s | 2.5GSa/s    | 625MSa/s |
| Vertical resolution  | 16bits                                                                       | 16bits   | 14bits      | 16bits   | 14bits      | 16bits   |
| Arbitrary wave depth | 8pts-64Mpts                                                                  | 8kpts    | 8pts-64Mpts | 8kpts    | 8pts-64Mpts | 8kpts    |
| Waveform             | Sine, square, ramp, pulse, harmonic, noise, PRBS, DC, arbitrary wave         |          |             |          |             |          |
| Operating mode       | Continue, Modulate, Sweep, Burst, Frequency counter, Protocol                |          |             |          |             |          |
| Modulation type      | AM, FM, PM, DSBAM, QAM, ASK, FSK, 3FSK, 4FSK, PSK, BPSK, QPSK, OSK, PWM, SUM |          |             |          |             |          |

## Technical Parameter

Except as otherwise noted and marked "typical value",

all the technical index is normal when in two terms as follows,

1. Signal generator execute calibration and within calibration period.
2. Signal generator continuous operating in specified operating temperature over 30min.

| Channel                           | CH1 & CH2                                                                     |                       |              | CH3 & CH4 |          |             |
|-----------------------------------|-------------------------------------------------------------------------------|-----------------------|--------------|-----------|----------|-------------|
| Model                             | UTG9604T                                                                      | UTG9504T              | UTG9354T     | UTG9604T  | UTG9504T | UTG9354T    |
| Maximum frequency                 | 600MHz                                                                        | 500MHz                | 350MHz       | 200MHz    |          | 160MHz      |
| Sampling rate                     | 2.5GSa/s                                                                      |                       |              | 625MSa/s  |          |             |
| Vertical resolution               | 16bit                                                                         | 14bit                 |              | 16bit     |          |             |
| Arbitrary wave length             | 8pts-64Mpts                                                                   |                       |              | 8kpts     |          |             |
| Mode                              | Continue, Modulate, Sweep, Burst, Frequency counter, Protocol                 |                       |              |           |          |             |
| Waveform                          | Sine, Square, Ramp, Pulse, Harmonic, Noise, PRBS, DC, Arbitrary wave          |                       |              |           |          |             |
| Modulation type                   | AM, FM, PM, DSB-AM, QAM, ASK, FSK, 3FSK, 4FSK, PSK, BPSK, QPSK, OSK, PWM, SUM |                       |              |           |          |             |
| Frequency sweep type              | Linear, logarithm, stepping, list sweep                                       |                       |              |           |          |             |
| Burst type                        | N cycle, infinite, gated                                                      |                       |              |           |          |             |
| Digital protocol                  | SPI, I2C, UART                                                                |                       |              |           |          |             |
| Frequency counter                 | 100mHz-800MHz, AC, DC                                                         |                       |              |           |          |             |
| Frequency Characteristics         |                                                                               |                       |              |           |          |             |
| Resolution                        | 1μHz                                                                          |                       |              |           |          |             |
| Reference frequency               | frequency                                                                     | 10.0000MHz            |              |           |          |             |
|                                   | Initial accuracy                                                              | ±0.5ppm, 25℃          |              |           |          |             |
|                                   | Temperature stability                                                         | ±0.5ppm, 0℃~+40℃      |              |           |          |             |
|                                   | Aging rate                                                                    | ±1ppm within one year |              |           |          |             |
| Output Characteristics            |                                                                               |                       |              |           |          |             |
| Channel                           | CH1 & CH2                                                                     |                       |              | CH3 & CH4 |          |             |
| Model                             | UTG9604T                                                                      | UTG9504T              | UTG9354T     | UTG9604T  | UTG9504T | UTG9354T    |
| Output impedance                  | 50Ω (Typical value)                                                           |                       |              |           |          |             |
| Amplitude range<br>(Load: High Z) | ≤40MHz                                                                        |                       | 2mVpp~20Vpp  | ≤20MHz    |          | 2mVpp~20Vpp |
|                                   | ≤120MHz                                                                       |                       | 2mVpp~10Vpp  | ≤80MHz    |          | 2mVpp~10Vpp |
|                                   | ≤160MHz                                                                       |                       | 2mVpp~5Vpp   | ≤20MHz    |          | 2mVpp~5Vpp  |
|                                   | ≤300MHz                                                                       |                       | 2mVpp~4Vpp   | ≤80MHz    |          | 2mVpp~3Vpp  |
|                                   | ≤400MHz                                                                       |                       | 2mVpp~2.5Vpp | -         |          | -           |
|                                   | ≤500MHz                                                                       |                       | 2mVpp~1.5Vpp | -         |          | -           |
|                                   | ≤600MHz                                                                       |                       | 2mVpp~1Vpp   | -         |          | -           |

|                                                               |                                                              |  |             |               |             |                          |             |               |          |      |             |  |
|---------------------------------------------------------------|--------------------------------------------------------------|--|-------------|---------------|-------------|--------------------------|-------------|---------------|----------|------|-------------|--|
| Amplitude range<br>(Load: 50Ω)                                | ≤40MHz                                                       |  |             | 1mVpp~10Vpp   |             | ≤20MHz                   |             | 1mVpp~10Vpp   |          |      |             |  |
|                                                               | ≤120MHz                                                      |  |             | 1mVpp~5Vpp    |             | ≤80MHz                   |             | 1mVpp~5Vpp    |          |      |             |  |
|                                                               | ≤160MHz                                                      |  |             | 1mVpp~2.5Vpp  |             | ≤120MHz                  |             | 1mVpp~2.5Vpp  |          |      |             |  |
|                                                               | ≤300MHz                                                      |  |             | 1mVpp~2Vpp    |             | ≤200MHz                  |             | 1mVpp~2Vpp    |          |      |             |  |
|                                                               | ≤400MHz                                                      |  |             | 1mVpp~1.25Vpp |             | -                        |             | 1mVpp~1.25Vpp |          |      |             |  |
|                                                               | ≤500MHz                                                      |  |             | 1mVpp~0.75Vpp |             | -                        |             | 1mVpp~0.75Vpp |          |      |             |  |
|                                                               | ≤600MHz                                                      |  |             | 1mVpp~0.5Vpp  |             | -                        |             | 1mVpp~0.5Vpp  |          |      |             |  |
| Accuracy                                                      | (1kHz sine wave, 0V deviation, >10mVpp)                      |  |             |               |             |                          |             |               |          |      |             |  |
|                                                               | ± (amplitude value 1%+1mVpp)                                 |  |             |               |             |                          |             |               |          |      |             |  |
| DC offset range                                               | range: (Peak value AC+DC)                                    |  |             |               |             |                          |             |               |          |      |             |  |
|                                                               | -5Vpp~5Vpp(50Ω); -10Vpp~10Vpp(High Z)                        |  |             |               |             |                          |             |               |          |      |             |  |
| Accuracy of deviation                                         | ±1% of deviation value ±0.5%±2mV of amplitude value          |  |             |               |             |                          |             |               |          |      |             |  |
| Sine Wave Characteristics                                     |                                                              |  |             |               |             |                          |             |               |          |      |             |  |
| Channel                                                       | CH3/CH4                                                      |  |             |               |             | CH3 & CH4                |             |               |          |      |             |  |
| Model                                                         | UTG9604T                                                     |  | UTG9504T    |               | UTG9354T    |                          | UTG9604T    |               | UTG9504T |      | UTG9354T    |  |
| Frequency                                                     | 1μHz-600MHz                                                  |  | 1μHz-500MHz |               | 1μHz-350MHz |                          | 1μHz-200MHz |               |          |      | 1μHz-160MHz |  |
| Resolution                                                    | 1μHz                                                         |  |             |               |             |                          |             |               |          |      |             |  |
| Harmonic distortion<br>(Typical value)                        | ≤10MHz (0dBm) , ≤-65dBc                                      |  |             |               |             | ≤10MHz (0dBm) , ≤-65dBc  |             |               |          |      |             |  |
|                                                               | ≤60MHz (0dBm) , ≤-60dBc                                      |  |             |               |             | ≤60MHz (0dBm) , ≤-60dBc  |             |               |          |      |             |  |
|                                                               | ≤150MHz (0dBm) , ≤-50dBc                                     |  |             |               |             | ≤100MHz (0dBm) , ≤-55dBc |             |               |          |      |             |  |
|                                                               | ≤200MHz (0dBm) , ≤-40dBc                                     |  |             |               |             | ≤200MHz (0dBm) , ≤-40dBc |             |               |          |      |             |  |
|                                                               | ≤600MHz (0dBm) , ≤-28dBc                                     |  |             |               |             | -                        |             |               |          |      |             |  |
| Spurious signal<br>(nonharmonic, typical value)               | ≤10MHz <-70 dBc, Typical value(0dBm)                         |  |             |               |             |                          |             |               |          |      |             |  |
|                                                               | > 10MHz <-70dBc+6dB/ octave , Typical value(0dBm)            |  |             |               |             |                          |             |               |          |      |             |  |
| Total harmonic distortion<br>(Typical value)                  | 0.075 % (0 dBm, 10 Hz ~ 20 kHz)                              |  |             |               |             |                          |             |               |          |      |             |  |
| Nonharmonic spurious                                          | -60dBc (0dBm, ≤350MHz)                                       |  |             |               |             | -60dBc (0dBm, ≤200MHz)   |             |               |          |      |             |  |
|                                                               | -55dBc (0dBm, >350MHz)                                       |  |             |               |             |                          |             |               |          |      |             |  |
| Amplitude flatness<br>(versus to 1kHz sine wave,<br>1Vpp/50Ω) | ≤10MHz, 0.1dB                                                |  |             |               |             |                          |             |               |          |      |             |  |
|                                                               | ≤160MHz, 0.2dB                                               |  |             |               |             |                          |             |               |          |      |             |  |
|                                                               | ≤350MHz, 0.4dB                                               |  |             |               |             |                          |             |               |          |      |             |  |
|                                                               | ≤600MHz, 0.8dB                                               |  |             |               |             |                          |             |               |          |      |             |  |
| Overlay amplitude of noise                                    | noise voltage≤1Vrms                                          |  |             |               |             |                          |             |               |          |      |             |  |
| Phase characteristics                                         | -360.000°- 360.000°                                          |  |             |               |             |                          |             |               |          |      |             |  |
| Phase noise(typical value)                                    | 10 MHz: ≤-125 dBc /Hz (typical value, 0dBm, 10kHz deviation) |  |             |               |             |                          |             |               |          |      |             |  |
| Square Wave Characteristics                                   |                                                              |  |             |               |             |                          |             |               |          |      |             |  |
| Channel                                                       | CH1 & CH2                                                    |  |             |               |             | CH3 & CH4                |             |               |          |      |             |  |
| Model                                                         | UTG9604T                                                     |  | UTG9504T    |               | UTG9354T    |                          | UTG9604T    |               | UTG9504T |      | UTG9354T    |  |
| Frequency                                                     | 1μHz-200MHz                                                  |  | 1μHz-160MHz |               | 1μHz-120MHz |                          | 1μHz-60MHz  |               |          |      | 1μHz-50MHz  |  |
| Rising/falling time                                           | 1μHz                                                         |  |             |               |             |                          |             |               |          |      |             |  |
| Rising/falling time                                           | 1MHz, 1 Vpp, 50Ω load                                        |  |             |               |             |                          |             |               |          |      |             |  |
|                                                               | <1ns                                                         |  | <2ns        |               |             | <5ns                     |             |               |          | <6ns |             |  |
| Overshoot (typical value)                                     | <2% , (1MHz, 1 Vpp, 50Ω load)                                |  |             |               |             |                          |             |               |          |      |             |  |
| Duty ratio                                                    | 0.000001%-99.999999%                                         |  |             |               |             | 0.000001%-99.999999%     |             |               |          |      |             |  |
| Pulse width                                                   | 2.4ns (typical value)                                        |  |             |               |             | 8.0ns (typical value)    |             |               |          |      |             |  |
| Jitter (typical value)                                        | 100 ps (1Vpp, 50Ω load)                                      |  |             |               |             |                          |             |               |          |      |             |  |
| Phase characteristics                                         | -360.000°- 360.000°                                          |  |             |               |             |                          |             |               |          |      |             |  |
| Overlay amplitude of noise                                    | noise voltage≤1Vrms                                          |  |             |               |             |                          |             |               |          |      |             |  |
| Pulse Wave Characteristics                                    |                                                              |  |             |               |             |                          |             |               |          |      |             |  |
| Channel                                                       | CH1 & CH2                                                    |  |             |               |             | CH3 & CH4                |             |               |          |      |             |  |
| Model                                                         | UTG9604T                                                     |  | UTG9504T    |               | UTG9354T    |                          | UTG9604T    |               | UTG9504T |      | UTG9354T    |  |
| Frequency                                                     | 1μHz-200MHz                                                  |  | 1μHz-160MHz |               | 1μHz-120MHz |                          | 1μHz-60MHz  |               |          |      | 1μHz-50MHz  |  |

|                                |                                                                        |                 |                 |                       |             |              |
|--------------------------------|------------------------------------------------------------------------|-----------------|-----------------|-----------------------|-------------|--------------|
| Resolution                     | 1μHz                                                                   |                 |                 |                       |             |              |
| Symmetry                       | 1MHz, 1Vpp, 50Ω load                                                   |                 |                 |                       |             |              |
| Linearity                      | 1ns-10ks                                                               | 1.5ns-10ks      |                 | 2ns-10ks              | 5ns-2ks     | 6ns-2ks      |
| Overshoot (typical value)      | <2% , (1MHz, edge≥2ns , 1Vpp, 50Ω load)                                |                 |                 |                       |             |              |
| Duty ratio                     | 0.000001%-99.999999%                                                   |                 |                 | 0.000001%-99.999999%  |             |              |
| Pulse width                    | 2.4ns (typical value)                                                  |                 |                 | 8.0ns (typical value) |             |              |
| Jitter (typical value)         | 100 ps (1Vpp, 50Ω load)                                                |                 |                 |                       |             |              |
| Phase characteristics          | -360.000°~ 360.000°                                                    |                 |                 |                       |             |              |
| Overlay amplitude of noise     | noise voltage≤1Vrms                                                    |                 |                 |                       |             |              |
| Ramp Wave Characteristics      |                                                                        |                 |                 |                       |             |              |
| Channel                        | CH1& CH2                                                               |                 |                 | CH3 & CH4             |             |              |
| Model                          | UTG9604T                                                               | UTG9604T        | UTG9354T        | UTG9604T              | UTG9504T    | UTG9354T     |
| Frequency                      | 1μHz-30MHz                                                             |                 | 1μHz-20MHz      | 1μHz-10MHz            |             | 1μHz-8MHz    |
| Resolution                     | 1μHz                                                                   |                 |                 |                       |             |              |
| Symmetry                       | 0.00%-100.00%                                                          |                 |                 |                       |             |              |
| Linearity                      | <1%, (1kHz, 1Vpp, 50% Symmetry)                                        |                 |                 |                       |             |              |
| Phase characteristics          | -360.000°~ 360.000°                                                    |                 |                 |                       |             |              |
| Overlay amplitude of noise     | noise voltage≤1Vrms                                                    |                 |                 |                       |             |              |
| Gaussian Noise Characteristics |                                                                        |                 |                 |                       |             |              |
| Channel                        | CH1& CH2                                                               |                 |                 | CH3 & CH4             |             |              |
| Model                          | UTG9604T                                                               | UTG9504T        | UTG9504T        | UTG9604T              | UTG9504T    | UTG9354T     |
| Frequency                      | 1mHz-600MHz                                                            | 1mHz-500MHz     | 1mHz-350MHz     | 1mHz-200MHz           | 1mHz-200MHz | 1mHz-160MHz  |
| Arbitrary Wave Characteristics |                                                                        |                 |                 |                       |             |              |
| Channel                        | CH1& CH2                                                               |                 |                 | CH3 & CH4             |             |              |
| Model                          |                                                                        | UTG9604T        | UTG9504T        | UTG9354T              | UTG9354T    | UTG9504T     |
| Sampling rate                  | DDS                                                                    | 2.5GSa/s        |                 |                       | 625MSa/s    |              |
|                                | Point by point                                                         | 1μSa/s~600MSa/s | 1μSa/s~500MSa/s | 1μSa/s~350MSa/s       | -           |              |
| Frequency range(DDS)           | 1μHz-100MHz                                                            |                 | 1μHz-80MHz      |                       | 1μHz-60MHz  |              |
| Length                         | 8pts-64Mpts                                                            |                 |                 | 8kpts (fixed)         |             |              |
| Vertical resolution            | 16bit                                                                  | 14bit           |                 | 16bit                 |             |              |
| Nonvolatile storage            | more than 200 waveforms                                                |                 |                 |                       |             |              |
| Minimum rising/falling time    | <4ns, (50Ω, 1Vpp)                                                      |                 |                 |                       |             |              |
| Phase characteristics(DDS)     | -360.000°~ 360.000° (DDS model)                                        |                 |                 |                       |             |              |
| Jitter                         | <150ps                                                                 |                 |                 |                       |             |              |
| Overlay amplitude of noise     | noise voltage≤1Vrms                                                    |                 |                 |                       |             |              |
| PRBS Characteristics           |                                                                        |                 |                 |                       |             |              |
| Channel                        | CH1& CH2                                                               |                 |                 | CH3 & CH4             |             |              |
| Model                          | UTG9604T                                                               | UTG9504T        | UTG9354T        | UTG9604T              | UTG9504T    | UTG9354T     |
| Bitrate                        | 1μbps-120Mbps                                                          |                 | 1μbps-80Mbps    | 1μbps-60Mbps          |             | 1μbps-40Mbps |
| Edge time                      | 2.6ns-1000s                                                            |                 |                 | 4.2ns-1000s           |             |              |
| PN code                        | PN3、PN5、PN7、PN9、PN11、PN13、PN15、PN17、PN21、PN23、PN25、PN27、PN29、PN31、PN33 |                 |                 |                       |             |              |
| Overlay amplitude of noise     | noise voltage≤1Vrms                                                    |                 |                 |                       |             |              |
| Harmonic Wave Characteristics  |                                                                        |                 |                 |                       |             |              |
| Channel                        | CH1& CH2                                                               |                 |                 | CH3 & CH4             |             |              |
| Model                          | UTG9604T                                                               | UTG9504T        | UTG9354T        | UTG9604T              | UTG9504T    | UTG9354T     |
| Frequency range                | 1μHz-300MHz                                                            | 1μHz-250MHz     | 1μHz-175MHz     | 1μHz-100MHz           |             | 1μHz-80MHz   |
| Harmonic time                  | 1-16                                                                   |                 |                 |                       |             |              |
| Harmonic type                  | even harmonic, odd harmonic, all harmonics, customize                  |                 |                 |                       |             |              |
| Harmonic amplitude             | 1mV-10Vpp(50Ω load)                                                    |                 |                 |                       |             |              |
|                                | set the amplitude according to the selected harmonic serial number     |                 |                 |                       |             |              |
| Harmonic phase                 | 0.00°-360.00°                                                          |                 |                 |                       |             |              |
|                                | set the phase according to the selected harmonic serial number         |                 |                 |                       |             |              |
| AM Modulation                  |                                                                        |                 |                 |                       |             |              |

|                      |                                                                |             |             |             |          |             |
|----------------------|----------------------------------------------------------------|-------------|-------------|-------------|----------|-------------|
| Model                | UTG9604T、UTG9504T、UTG9354T                                     |             |             |             |          |             |
| Carrier wave         | Sine, square, pulse, ramp, arbitrary wave                      |             |             |             |          |             |
| Source               | Internal/external                                              |             |             |             |          |             |
| Modulation wave      | Sine, square, rising ramp, falling ramp, noise, arbitrary wave |             |             |             |          |             |
| Modulation depth     | 0.00%-120.00%                                                  |             |             |             |          |             |
| Modulation frequency | 1μHz-2MHz (Internal)                                           |             |             |             |          |             |
| DSB-AM Modulation    |                                                                |             |             |             |          |             |
| Model                | UTG9604T、UTG9504T、UTG9354T                                     |             |             |             |          |             |
| Carrier wave         | Sine, square, pulse, ramp, arbitrary wave                      |             |             |             |          |             |
| Source               | internal/external                                              |             |             |             |          |             |
| Modulation wave      | Sine, square, rising ramp, falling ramp, noise, arbitrary wave |             |             |             |          |             |
| Modulation depth     | 0.00%-100.00%                                                  |             |             |             |          |             |
| Modulation frequency | 1μHz-2MHz (Internal)                                           |             |             |             |          |             |
| FM Modulation        |                                                                |             |             |             |          |             |
| Channel              | CH1 & CH2                                                      |             |             | CH3 & CH4   |          |             |
| Model                | UTG9604T                                                       | UTG9504T    | UTG9354T    | UTG9604T    | UTG9504T | UTG9354T    |
| Trigger source       | Internal, external rising edge, external falling edge, manual  |             |             |             |          |             |
| Trigger output       | Close, rising edge, falling edge                               |             |             |             |          |             |
| Start frequency      | 1μHz-600MHz                                                    | 1μHz-500MHz | 1μHz-350MHz | 1μHz-200MHz |          | 1μHz-160MHz |
| Stop frequency       | 1μHz-600MHz                                                    | 1μHz-500MHz | 1μHz-350MHz | 1μHz-200MHz |          | 1μHz-160MHz |
| Dwell time           | 1ms-500s                                                       |             |             |             |          |             |
| Step                 | 2-2048 steps                                                   |             |             |             |          |             |
| List Frequency Sweep |                                                                |             |             |             |          |             |
| Channel              | CH1 & CH2                                                      |             |             | CH3 & CH4   |          |             |
| Model                | UTG9604T                                                       | UTG9504T    | UTG9354T    | UTG9604T    | UTG9504T | UTG9354T    |
| Modulation wave      | Sine, square, rising ramp, falling ramp, noise, arbitrary wave |             |             |             |          |             |
| Phase deviation      | 0.00°- 360.00°                                                 |             |             |             |          |             |
| Modulation frequency | 1μHz-2MHz (Internal)                                           |             |             |             |          |             |
| ASK Modulation       |                                                                |             |             |             |          |             |
| Model                | UTG9604T、UTG9504T、UTG9354T                                     |             |             |             |          |             |
| Carrier wave         | Sine、 square、 pulse、 ramp、 arbitrary wave                      |             |             |             |          |             |
| Source               | Internal (50% Duty ratiosquare) / external (TTL level)         |             |             |             |          |             |
| Modulation frequency | 1μHz-2MHz (Internal)                                           |             |             |             |          |             |
| FSK Modulation       |                                                                |             |             |             |          |             |
| Channel              | CH1/CH2                                                        |             |             | CH3 & CH4   |          |             |
| Model                | UTG9604T                                                       | UTG9504T    | UTG9354T    | UTG9604T    | UTG9504T | UTG9354T    |
| Carrier wave         | Sine、 square、 pulse、 ramp、 arbitrary wave                      |             |             |             |          |             |
| Source               | Internal (50% Duty ratio square) / external (TTL LEVEL)        |             |             |             |          |             |
| Modulation frequency | 1μHz-2MHz (Internal)                                           |             |             |             |          |             |
| Hopping frequency 1  | 1μHz-600MHz                                                    | 1μHz-500MHz | 1μHz-350MHz | 1μHz-200MHz |          | 1μHz-160MHz |
| 3FSK Modulation      |                                                                |             |             |             |          |             |
| Channel              | CH1 & CH2                                                      |             |             | CH3 & CH4   |          |             |
| Model                | UTG9604T                                                       | UTG9504T    | UTG9354T    | UTG9604T    | UTG9504T | UTG9354T    |
| Carrier wave         | Sine、 square、 pulse、 ramp、 arbitrary wave                      |             |             |             |          |             |
| Source               | Internal (50% Duty ratio square)                               |             |             |             |          |             |
| Modulation frequency | 1μHz-2MHz (Internal)                                           |             |             |             |          |             |
| Hopping frequency 1  | 1μHz-600MHz                                                    | 1μHz-500MHz | 1μHz-350MHz | 1μHz-200MHz |          | 1μHz-160MHz |
| Hopping frequency 2  | 1μHz-600MHz                                                    | 1μHz-500MHz | 1μHz-350MHz | 1μHz-200MHz |          | 1μHz-160MHz |
| 4FSK Modulation      |                                                                |             |             |             |          |             |
| Channel              | CH1 & CH2                                                      |             |             | CH3 & CH4   |          |             |
| Model                | UTG9604T                                                       | UTG9504T    | UTG9354T    | UTG9604T    | UTG9504T | UTG9354T    |
| Carrier wave         | Sine、 square、 pulse、 ramp、 arbitrary wave                      |             |             |             |          |             |
| Source               | Internal (50% Duty ratio square)                               |             |             |             |          |             |
| Modulation frequency | 1μHz-2MHz (Internal)                                           |             |             |             |          |             |

|                        |                                                                        |             |             |             |                        |
|------------------------|------------------------------------------------------------------------|-------------|-------------|-------------|------------------------|
| Hopping frequency 1    | 1μHz-600MHz                                                            | 1μHz-500MHz | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz            |
| Hopping frequency 2    | 1μHz-600MHz                                                            | 1μHz-500MHz | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz            |
| Hopping frequency 3    | 1μHz-600MHz                                                            | 1μHz-500MHz | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz            |
| PSK Modulation         |                                                                        |             |             |             |                        |
| Model                  | UTG9604T、UTG9504T、UTG9354T                                             |             |             |             |                        |
| Carrier wave           | Sine、square、ramp、arbitrary wave                                        |             |             |             |                        |
| Source                 | Internal (50% Duty ratio square) /external (TTL LEVEL)                 |             |             |             |                        |
| Modulation frequency   | 1μHz-2MHz (Internal)                                                   |             |             |             |                        |
| Hopping phase          | 0.00°- 360.00°                                                         |             |             |             |                        |
| BPSK Modulation        |                                                                        |             |             |             |                        |
| Model                  | UTG9604T、UTG9504T、UTG9354T                                             |             |             |             |                        |
| Carrier wave           | Sine、square、ramp、arbitrary wave                                        |             |             |             |                        |
| PN code                | PN3、PN5、PN7、PN9、PN11、PN13、PN15、PN17、PN21、PN23、PN25、PN27、PN29、PN31、PN33 |             |             |             |                        |
| Bitrate                | 1μbps-2Mbps                                                            |             |             |             |                        |
| Phase 1                | 0.00°- 360.00°                                                         |             |             |             |                        |
| Phase 2                | 0.00°- 360.00°                                                         |             |             |             |                        |
| QPSK Modulation        |                                                                        |             |             |             |                        |
| Model                  | UTG9604T、UTG9504T、UTG9354T                                             |             |             |             |                        |
| Carrier wave           | Sine、square、ramp、arbitrary wave                                        |             |             |             |                        |
| PN code                | PN3、PN5、PN7、PN9、PN11、PN13、PN15、PN17、PN21、PN23、PN25、PN27、PN29、PN31、PN33 |             |             |             |                        |
| Bitrate                | 1μbps-2Mbps                                                            |             |             |             |                        |
| Phase 1                | 0.00°- 360.00°                                                         |             |             |             |                        |
| Phase 2                | 0.00°- 360.00°                                                         |             |             |             |                        |
| Phase 3                | 0.00°- 360.00°                                                         |             |             |             |                        |
| Phase 4                | 0.00°- 360.00°                                                         |             |             |             |                        |
| OSK Modulation         |                                                                        |             |             |             |                        |
| Model                  | UTG9604T、UTG9504T、UTG9354T                                             |             |             |             |                        |
| Carrier wave           | Sine                                                                   |             |             |             |                        |
| Trigger source         | Internal/external                                                      |             |             |             |                        |
| Modulation frequency   | 1μHz-2MHz (Internal)                                                   |             |             |             |                        |
| Oscillation time       | 1ns-500ks                                                              |             |             |             |                        |
| QAM Modulation         |                                                                        |             |             |             |                        |
| Model                  | UTG9604T、UTG9504T、UTG9354T                                             |             |             |             |                        |
| IQ map                 | QAM4、QAM8、QAM16、QAM32、QAM64、QAM128、QAM256                              |             |             |             |                        |
| PN Code                | PN3、PN5、PN7、PN9、PN11、PN13、PN15、PN17、PN21、PN23、PN25、PN27、PN29、PN31、PN33 |             |             |             |                        |
| Bitrate                | 1μbps-2Mbps                                                            |             |             |             |                        |
| PWM Modulation         |                                                                        |             |             |             |                        |
| Model                  | UTG9604T、UTG9504T、UTG9354T                                             |             |             |             |                        |
| Carrier wave           | pulse                                                                  |             |             |             |                        |
| Source                 | Internal/external                                                      |             |             |             |                        |
| Modulation wave        | Sine、square、rising ramp、falling ramp、noise、arbitrary wave              |             |             |             |                        |
| Modulation frequency   | 1μHz-2MHz (Internal)                                                   |             |             |             |                        |
| Width deviation        | 0.000000%-49.999999% of pulse width                                    |             |             |             |                        |
| SUM Modulation         |                                                                        |             |             |             |                        |
| Model                  | UTG9604T、UTG9504T、UTG9354T                                             |             |             |             |                        |
| Carrier wave           | Sine、square、pulse、ramp、arbitrary wave、harmonic、noise                   |             |             |             |                        |
| Source                 | Internal/external                                                      |             |             |             |                        |
| Modulation wave        | Sine、square、rising ramp、falling ramp、noise、arbitrary wave              |             |             |             |                        |
| Modulation frequency   | 1μHz-2MHz (Internal)                                                   |             |             |             |                        |
| Modulation depth       | 0.00%-100.00%                                                          |             |             |             |                        |
| Linear Frequency Sweep |                                                                        |             |             |             |                        |
| Channel                | CH1 & CH2                                                              |             |             | CH3 & CH4   |                        |
| Model                  | UTG9604T                                                               | UTG9504T    | UTG9354T    | UTG9604T    | UTG9504T      UTG9354T |
| Trigger source         | Internal, external rising edge, external falling edge, manual          |             |             |             |                        |
| Trigger output         | Close, rising edge, falling edge                                       |             |             |             |                        |

|                           |                                                                                                              |               |             |             |             |
|---------------------------|--------------------------------------------------------------------------------------------------------------|---------------|-------------|-------------|-------------|
| Start frequency           | 1μHz-600MHz                                                                                                  | 1μHz-500MHz   | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz |
| Stop frequency            | 1μHz-600MHz                                                                                                  | 1μHz-500MHz   | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz |
| Frequency sweep time      | 1ms-500s                                                                                                     |               |             |             |             |
| Logarithm Frequency Sweep |                                                                                                              |               |             |             |             |
| Channel                   | CH1 & CH2                                                                                                    |               |             | CH3 & CH4   |             |
| Model                     | UTG9604T                                                                                                     | UTG9504T      | UTG9354T    | UTG9604T    | UTG9504T    |
| Trigger source            | Internal, external rising edge, external falling edge, manual                                                |               |             |             |             |
| Trigger output            | Close, rising edge, falling edge                                                                             |               |             |             |             |
| Start frequency           | 1μHz-600MHz                                                                                                  | 1μHz-500MHz   | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz |
| Stop frequency            | 1μHz-600MHz                                                                                                  | 1μHz-500MHz   | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz |
| Frequency sweep time      | 1ms-500s                                                                                                     |               |             |             |             |
| Stepping Frequency Sweep  |                                                                                                              |               |             |             |             |
| Channel                   | CH1 & CH2                                                                                                    |               |             | CH3 & CH4   |             |
| Model                     | UTG9604T                                                                                                     | UTG9504T      | UTG9354T    | UTG9604T    | UTG9504T    |
| Gating source             | external trigger                                                                                             |               |             |             |             |
| Trigger source            | internal, external rise edge, external fall edge, manual                                                     |               |             |             |             |
| Trigger output            | Close, rising edge, falling edge                                                                             |               |             |             |             |
| Start frequency           | 1μHz-600MHz                                                                                                  | 1μHz-500MHz   | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz |
| Stop frequency            | 1μHz-600MHz                                                                                                  | 1μHz-500MHz   | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz |
| Dwell time                | 1ms-500s                                                                                                     |               |             |             |             |
| Step                      | 2-2048 steps                                                                                                 |               |             |             |             |
| List Frequency Sweep      |                                                                                                              |               |             |             |             |
| Channel                   | CH1 & CH2                                                                                                    |               |             | CH3 & CH4   |             |
| Model                     | UTG9604T                                                                                                     | UTG9504T      | UTG9354T    | UTG9604T    | UTG9504T    |
| Trigger source            | Internal, external rising edge, external falling edge, manual                                                |               |             |             |             |
| Trigger output            | Close, rising edge, falling edge                                                                             |               |             |             |             |
| Start frequency           | 1μHz-600MHz                                                                                                  | 1μHz-500MHz   | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz |
| Stop frequency            | 1μHz-600MHz                                                                                                  | 1μHz-500MHz   | 1μHz-350MHz | 1μHz-200MHz | 1μHz-160MHz |
| Dwell time                | 1ms-500s                                                                                                     |               |             |             |             |
| List file                 | Maximum 2048 frequency points for a single file<br>Frequency range is accordance with fundamental wave range |               |             |             |             |
| N cycle                   |                                                                                                              |               |             |             |             |
| Waveform                  | Sine、square、pulse、ramp、arbitrary wave                                                                        |               |             |             |             |
| Trigger source            | Internal, external rising edge, external falling edge, manual                                                |               |             |             |             |
| Trigger output            | Close, rising edge, falling edge                                                                             |               |             |             |             |
| Trigger cycle             | 1us-500s                                                                                                     |               |             |             |             |
| Cycle number              | 1-50000                                                                                                      |               |             |             |             |
| Gate                      |                                                                                                              |               |             |             |             |
| Waveform                  | Sine、square、pulse、ramp、arbitrary wave、noise                                                                  |               |             |             |             |
| Polarity                  | positive、negative(TTL LEVEL)                                                                                 |               |             |             |             |
| Phase                     | 0.00°-360.00°                                                                                                |               |             |             |             |
| Infinite                  |                                                                                                              |               |             |             |             |
| Waveform                  | Sine、square、pulse、ramp、arbitrary wave                                                                        |               |             |             |             |
| Trigger source            | Internal, external rising edge, external falling edge, manual                                                |               |             |             |             |
| Trigger output            | Close, rising edge, falling edge                                                                             |               |             |             |             |
| phase                     | 0.00°-360.00°                                                                                                |               |             |             |             |
| Frequency Counter         |                                                                                                              |               |             |             |             |
| Measurement parameter     | Frequency, period, duty ratio, positive pulse width, negative pulse width                                    |               |             |             |             |
| Accuracy                  | ±5ppm                                                                                                        |               |             |             |             |
| Frequency resolution      | 8bit                                                                                                         |               |             |             |             |
| Frequency range           | 100mHz-800MHz                                                                                                | 100mHz-60MHz  |             | ≥100mVrms   |             |
|                           |                                                                                                              | 60MHz-300MHz  |             | ≥200mVrms   |             |
|                           |                                                                                                              | 300MHz-500MHz |             | ≥500mVrms   |             |
|                           |                                                                                                              | 500MHz-800MHz |             | ≥1Vrms      |             |

|                           |                                                  |                          |                     |                     |                  |          |                     |
|---------------------------|--------------------------------------------------|--------------------------|---------------------|---------------------|------------------|----------|---------------------|
| Coupling mode             | AC、DC、HF reject                                  |                          |                     |                     |                  |          |                     |
| Trigger level             | -2.5V-2.5V                                       |                          |                     |                     |                  |          |                     |
| Sensitivity               | 0%-100%                                          |                          |                     |                     |                  |          |                     |
| Digital Protocol          | SPI Characteristics                              |                          |                     |                     |                  |          |                     |
| Interface                 | CH2 - SCLK、CH3 - nCS、CH4 - MOSI                  |                          |                     |                     |                  |          |                     |
| Amplitude                 | 1mV-10V                                          |                          |                     |                     |                  |          |                     |
| Send way                  | Auto, manual                                     |                          |                     |                     |                  |          |                     |
| Interval time             | 20ns-1000s in auto mode of send way              |                          |                     |                     |                  |          |                     |
| Data format               | Hexadecimal, character                           |                          |                     |                     |                  |          |                     |
| Data length               | Maximum 2048 bytes                               |                          |                     |                     |                  |          |                     |
| Digital Protocol          | I <sup>2</sup> C Characteristics Characteristics |                          |                     |                     |                  |          |                     |
| Interface                 | CH3 - SCL、CH4 - SDA                              |                          |                     |                     |                  |          |                     |
| Amplitude                 | 1mV-10V                                          |                          |                     |                     |                  |          |                     |
| Clock frequency           | 1Hz-50MH                                         |                          |                     |                     |                  |          |                     |
| Address                   | 7bit、10bit                                       |                          |                     |                     |                  |          |                     |
| Send way                  | Auto, manual                                     |                          |                     |                     |                  |          |                     |
| Interval time             | 20ns-1000s in auto mode of send way              |                          |                     |                     |                  |          |                     |
| Data format               | Hexadecimal, character                           |                          |                     |                     |                  |          |                     |
| Data length               | Maximum 2048 bytes                               |                          |                     |                     |                  |          |                     |
| Digital Protocol          | UART Characteristics                             |                          |                     |                     |                  |          |                     |
| Interface                 | CH4 - TX                                         |                          |                     |                     |                  |          |                     |
| Amplitude                 | 1mV-10V                                          |                          |                     |                     |                  |          |                     |
| Baud rate                 | 1-1000000 (customized)                           |                          |                     |                     |                  |          |                     |
| Date bit                  | 4、5、6、7、8                                        |                          |                     |                     |                  |          |                     |
| Stop bit                  | 1bit、2bit                                        |                          |                     |                     |                  |          |                     |
| Verify bit                | None, even, odd                                  |                          |                     |                     |                  |          |                     |
| Send way                  | Auto, manual                                     |                          |                     |                     |                  |          |                     |
| Interval time             | 20ns-1000s in auto mode of send way              |                          |                     |                     |                  |          |                     |
| Data format               | Hexadecimal, character                           |                          |                     |                     |                  |          |                     |
| Data length               | Maximum 2048 bytes                               |                          |                     |                     |                  |          |                     |
| Coupling & Merge          |                                                  |                          |                     |                     |                  |          |                     |
| Channel                   | CH1 & CH2                                        |                          |                     |                     | CH3 & CH4        |          |                     |
| Input frequency           |                                                  | UTG9604T                 | UTG9504T            | UTG9354T            | UTG9604T         | UTG9504T | UTG9354T            |
| Frequency coupling        | Ratio                                            | 0.0001-10000             |                     |                     |                  |          |                     |
|                           | Deviation                                        | -600MHz<br>~ 600MHz      | -500MHz<br>~ 500MHz | -350MHz<br>~ 350MHz | -200MHz ~ 200MHz |          | -160MHz<br>~ 160MHz |
| Phase coupling            | Ratio                                            | 0.0001-10000             |                     |                     |                  |          |                     |
|                           | Deviation                                        | -720°~ 720°              |                     |                     |                  |          |                     |
| Amplitude coupling        | Ratio                                            | 0.0001-10000             |                     |                     |                  |          |                     |
|                           | Deviation                                        | -9.999Vpp-9.999Vpp (50Ω) |                     |                     |                  |          |                     |
| Channel Merge             | CH1 merge with CH2, CH3 merge with CH4           |                          |                     |                     |                  |          |                     |
| External Modulation Input |                                                  |                          |                     |                     |                  |          |                     |
| Input frequency           | <50kHz                                           |                          |                     |                     |                  |          |                     |
| Modulation depth          | ± 5Vpk = 100%                                    |                          |                     |                     |                  |          |                     |
| Input impedance           | 5kΩ (typical value)                              |                          |                     |                     |                  |          |                     |
| External Reference Input  |                                                  |                          |                     |                     |                  |          |                     |
| Input frequency           | 10MHz±50Hz (clock frequency adjustable)          |                          |                     |                     |                  |          |                     |
| Level range               | Compatible with TTL                              |                          |                     |                     |                  |          |                     |
| Input impedance           | 10kΩ (typical value, DC coupling)                |                          |                     |                     |                  |          |                     |
| Lock time                 | <1s                                              |                          |                     |                     |                  |          |                     |
| Internal Reference Output |                                                  |                          |                     |                     |                  |          |                     |
| Input frequency           | 10MHz±50Hz                                       |                          |                     |                     |                  |          |                     |

|                                        |                                                                                                     |
|----------------------------------------|-----------------------------------------------------------------------------------------------------|
| Level range                            | Compatible with TTL                                                                                 |
| Level range                            | 50Ω(typical value, DC coupling)                                                                     |
| <b>Trigger input</b>                   |                                                                                                     |
| Slop                                   | Rising or falling, optional                                                                         |
| Input level                            | Compatible with TTL                                                                                 |
| Pulse width                            | >100ns                                                                                              |
| Input impedance                        | >10kΩ, DC coupling                                                                                  |
| Response time                          | <1μs, typical value                                                                                 |
| <b>Trigger output</b>                  |                                                                                                     |
| Maximum frequency                      | 1 MHz                                                                                               |
| Input level                            | Compatible with TTL                                                                                 |
| Pulse width                            | >400ns, typical value                                                                               |
| Output impedance                       | 50Ω, typical value                                                                                  |
| <b>Sync output</b>                     |                                                                                                     |
| Frequency range                        | ≤60MHz (CH3 is synchronized with CH1, CH4 is synchronized with CH2, CH3 can't synchronize with CH4) |
| Level                                  | Compatible with TTL                                                                                 |
| Output impedance                       | 50Ω, typical value                                                                                  |
| <b>General Technical Specification</b> |                                                                                                     |
| Communication interface                | USB Host, USB Device, LAN                                                                           |
| Display mode                           | 10.1" TFT capacitive touch, 1280*800 resolution                                                     |
| Backlight                              | 30%、40%、50%、60%、70%、80%、90%、100%                                                                    |
| Supply voltage                         | 100~240VACrms, 50Hz/60Hz; 100~120Vrms(±10%), 400 Hz                                                 |
| Power dissipation                      | Less than 50W                                                                                       |
| Fuse wire                              | 2A, T-class, 250V                                                                                   |
| Temperature range                      | operating: +10°C ~ +40°C Non-operating: -20°C ~ +60°C                                               |
| Cooling method                         | Forced cooling by fan                                                                               |
| Humidity range                         | <+35°C: ≤90%relative humidity                                                                       |
|                                        | +35°C~+40°C: ≤60%relative humidity                                                                  |
| Altitude                               | Operating: below 2000 meters                                                                        |
|                                        | Non-operating: below 15000 meters                                                                   |
| Size (reference)                       | 370mm×115mm×185mm                                                                                   |
| Net weight                             | 4.04kg                                                                                              |
| Gross weight                           | 6.06kg                                                                                              |



\*The UTG9600T series have been certified by CE, cETLus

## Accessories selection

| Accessory            | Quantity | Remark   |
|----------------------|----------|----------|
| National power cable | 1        | standard |
| USB line             | 1        | standard |
| BNC cable (1 meter)  | 4        | standard |
| Product warranty     | 1        | standard |

## Warranty

Three-years warranty, excluding probes and accessories.

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UNI-T group maintains a wide products category includes Digital Test & Measurement instruments, Field Testing Meter, Infrared thermal imaging products. As early as 2008, we continue to introduce self-developed Digital Test and Measurement instruments to the market and have made remarkable achievements. At present, we have formed a variety of product lines of Oscilloscope, AWG, Spectrum Analyzer, Bench Multi-meter, Power Supply, DC Load, Power Meter, LCR Meter, Micro Ohm Meter and Data logger. We have separated instruments sub-sites, [instruments.uni-trend.com](https://instruments.uni-trend.com), on the basis of the original website [www.uni-trend.com](https://www.uni-trend.com), in order to be more targeted to provide customers with better service and value.

**Para mayor información puede consultar el manual de usuario dando clic en el siguiente enlace:**

<http://unitrend.oss-cn-hongkong.aliyuncs.com/upload/file/20211119/UTG9000T%20Series%20Function%20Arbitrary%20Waveform%20Generator-%20User's%20Manual.pdf>

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[Instrument.uni-trend.com](https://Instrument.uni-trend.com)

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