Model	Oscilloscope channel	Bandwidth	Sampling rate	Storage depth	Signal source	Multimeter
TO1112	2 CH	110 MHz	250MSa/S	8M	-	-
TO1112C	2 CH	110 MHz	250MSa/S	8M	-	√
TO1112D	2 CH	110 MHz	250MSa/S	8M	√	√

Model	Oscilloscope channel	Bandwidth	Sampling rate	Storage depth	Signal source	Multimeter
TO1154C	4 CH	150 MHz	1GSa/s	8M	-	√
TO1204C	4 CH	200 MHz	1GSa/s	8M	-	√
TO1254C	4 CH	250 MHz	1GSa/s	8M	-	√
TO1154D	4 CH+1CH	150 MHz	1GSa/s	8M	25MHz	√
TO1204D	4 CH+1CH	200 MHz	1GSa/s	8M	25MHz	√
TO1254D	4 CH+1CH	250 MHz	1GSa/s	8M	25MHz	√

Model	Oscilloscope channel	Bandwidth	Sampling rate	Storage depth	Signal source	Multimeter
TO1152C	2 CH	150 MHz	1GSa/s	8M	-	√
TO1202C	2 CH	200 MHz	1GSa/s	8M	-	√
TO1252C	2 CH	250 MHz	1GSa/s	8M	-	√
TO1152D	2 CH+1CH	150 MHz	1GSa/s	8M	25MHz	√
TO1202D	2 CH+1CH	200 MHz	1GSa/s	8M	25MHz	√
TO1252D	2 CH+1CH	250 MHz	1GSa/s	8M	25MHz	√

Series	TO1000 Series (1G Sampling)	TO1112 Series (250M Sampling)
Level		
Horizontal Scale Range	2ns/div~100s/div1、2、5 sequence	2ns/div~100s/div1、2、5 sequence
Incremental Time Measurement Accuracy (Full Bandwidth)	Single, "Sampling" mode	Single, "Sampling" mode
	± (1 sampling interval +100ppm× reading +0.6ns)	± (1 sampling interval +100ppm× reading +0.6ns)
	> 16 times on average	> 16 times on average
	±(1 sampling interval +100ppm× reading +0.4ns)	±(1 sampling interval +100ppm× reading +0.4ns)
	Sampling interval = seconds/grid ÷200	Sampling interval = seconds/grid ÷200
Vertical		
A/D Converter	8-bit resolution,each channel sampled simultaneously	8-bit resolution,each channel sampled simultaneously
Vertical Cale Range	2mV/div~10V/div at input BNC	10mV/div~10V/div at input BNC
Vertical Resolution	8bit	8bit
Vertical Sensitivity Range	2mV/div~10V/div	10mV/div~10V/div
Offset Range	±1V (2mV/div~100mV/div)	±1Vmax(100mV/div)
	±10V (200mV/div~1V/div)	±10Vmax (1V/div)

		±50V (2V/div~10V/div)	±50Vmax (10V/div)
Dynamic Range		±5div (8bit)	±5div (8bit)
Optional Analog Bandwidth Limitation, Typical		20MHz,Each channel is independently selectable	20MHz, Each channel is independently selectable
DC Gain Accuracy		±3% FullScale	±3% FullScale
Isolation Between Channels		40dB, DC to the maximum rated bandwidth of each model	40dB, DC to the maximum rated bandwidth of each model
Note: Bandwidth reduced to 6MHz when using a 1X probe.			
Acquisition			
Sampling Rate Range		1GSa/s	250MSa/s
Acquisition Modes		Normal, Average, Peak, High resolution	Normal, Average, Peak, High resolution
Waveform Interpolation		(sinx) /x	(sinx) /x
Single Sequence	Acquisition Modes	Collection Stop Time	Collection Stop Time
	Normal and Peak	All channels perform single collection at the same time.	Simultaneous single acquisition of all channels
	Average	All channels perform collections for N times at the same time. N can be 2, 4, 8, 16, 32, 64, 128, or 256.	All channels conduct n acquisitions at the same time, and N can take the values of 2, 4, 8, 16, 32, 64, 128, 256
Storage Depth		8Mpts	8Mpts
Trigger			
Mode		Automatic, Normal, Single	Automatic, Normal, Single
Level		CH1~CH4 ±4 divisions from center of screen	CH1/CH2 ±4 divisions from center of screen
Release Inhibition Range		8ns~10s	8ns~10s
Trigger Level Accuracy		CH1~CH4 / CH1~CH2	CH1/CH2
Trigger Sensitivity		±0.87div(2mV/div) ±0.78div(5mV/div) ±0.69div(10mV/div) ±0.52div(20mV/div) ±0.47div(50mV/div) ±0.26div(100mV/div) ±0.26div(200mV/div) ±0.47div(500mV/div) ±0.26div(1V/div) ±0.26div(2V/div) ±0.26div(5V/div) ±0.26div(10V/div)	±0.87div(2mV/div) ±0.78div(5mV/div) ±0.69div(10mV/div) ±0.52div(20mV/div) ±0.47div(50mV/div) ±0.26div(100mV/div) ±0.26div(200mV/div) ±0.47div(500mV/div) ±0.26div(1V/div) ±0.26div(2V/div) ±0.26div(5V/div) ±0.26div(10V/div)
Edge-triggered			
Slope		Rising, Falling, Rising & Falling	Rising, Falling, Rising & Falling
Source		CH1~CH4 / CH1~CH2	CH1/CH2
Pulse Width Trigger			
Polarity		Positive polarity, negative polarity	Positive polarity, negative polarity
Condition		<、>、!=、=	<、>、!=、=
Source		CH1~CH4 / CH1~CH2	CH1/CH2
Pulse width range		8ns~10s	8ns~10s

Video Trigger		
Signal standard	NTSC、PAL、HDTV720p、HDTV1080p、HDTV1080i	NTSC、PAL、HDTV720p、HDTV1080p、HDTV1080i
Source	CH1~CH4 / CH1~CH2	CH1~CH2
Synchronization	Scan line, Line number, Odd field, Even field, All fields	Scan line, Line number, Odd field, Even field, All fields
Slope Trigger		
Slope	Rising, Falling	Rising, Falling
Condition	<、>、!=、=	<、>、!=、=
Source	CH1~CH4 / CH1~CH2	CH1/CH2
Time Range	8ns~10s	8ns~10s
Timeout Trigger		
Source	CH1~CH4 / CH1~CH2	CH1/CH2
Polarity	Positive polarity, negative polarity	Positive polarity, negative polarity
Time Range	8ns~10s	8ns~10s
Input		
Channel Count	4 / 2 Analog channels	2 Analog channels
Input Coupling	DC, AC or GND	DC, AC or GND
Input Impedance	1MΩ±2%	1MΩ±2%
Input Capacitance	18pF±3pF	18pF±3pF
Probe Attenuation	1X、10X	1X、10X
Support probe attenuation coefficient	0.01X~10000X	0.01X~10000X
Voltage Level	300VCATII	300VCATII
Maximum Input Voltage	300VRMS（10X）	300VRMS（10X）
Measurement		
Cursor	The voltage difference between the cursors △Y	
	The time difference between the cursors △X	
	Reciprocal of △X in Hertz (1/△X)	
Auto Measure	Frequency、Bimodal value、Average value、Maximum value、Minimum value、Period、Top value, Middle value、Bottom value、Amplitude、Root mean square、Rising edge overshoot、Rising edge precharge、Cycle root mean Square、Cycle average value、Rising time、Falling time、Positive pulse Width、Negative pulse width、Positive duty cycle、Negative duty cycle、FRR、FFF、Falling edge overshoot, Falling edge precharge, Pulse width、FRF、FFR、LRR、LRF、LFR、LFF、Maximum value time、Minimum value time、Positive phase difference、Negative phase difference、Variance、Number of positive pulses、Number of negative pulses、Number of rising edges、Number of falling edges、Trigger count	
Math Operations		
Data Source	CH1~CH4 / CH1~CH2	CH1/CH2
Operator	+、-、×、/、FFT	
FFT	Point	1024
	Window	Rectangle, Hanning, Hemming, Blackman, Bartlett, Flat top
	Display	Display single or display all
	Vertical scale	dB、VRms

Storage			
Save / Transfer out	Save and call out, Including Images, References, CSV, Binary, Settings		
Save to External Storage	Images, References, CSV, Binary, Settings		
Arbitrary Waveform Generator			
Channel Number	1		
Sampling Rate	200MSa/s		
Vertical Resolution	12bit		
The Highest Frequency	25MHz		
Standard Waveform	Sine wave, Square wave, Triangle wave, Noise, DC		
Sine Wave	Frequency range	0.1Hz~25MHz	
Square wave/Pulse	Frequency range	0.1Hz~10MHz	
	Duty ratio	0~100%	
Triangle Wave	Frequency range	0.1Hz~1MHz	
	Symmetry	0%~100%	
Noise	Bandwidth	＞25MHz	
DC	Offset	±1.5V（50Ω）、±3.0V（high resistance）	
	Resolution	100μV	
	Precision	2%（1KHz）	
Arbitrary Wave	Frequency range	0.1Hz~10MHz	
	Support upper computer download, and external memory calling out		
Amplitude	50Ω+2%		
Amplitude	0mV~3Vpp（50Ω）		
	0mV~6Vpp（high resistance）		
Frequency Resolution	0.1 Hz or 4 bits, take the greater one of the two		
Wavelength	4KSa		
Frequency Accuracy	100 ppm (< 10 kHz) 50 ppm (> 10 kHz)		
Modulation	FM	Modulation waveform	Sine wave, Square wave, Triangle wave
		Modulation frequency	1Hz~50KHz
		Modulation deviation	0.1Hz~1KHz
	AM	Modulation waveform	Sine wave, Square wave, Triangle wave
		Modulation frequency	1Hz~50KHz
		Modulation depth	0%-120%
Burst	Type	Multi-period, Infinite	
	Cycle Number	1~2000000000	
	Trigger source	Manual	

Multimeter			
Maximum resolution	4000 points		
Measuring method	Voltage, Current, resistance, capacitance, diode, on-off measurement		
Maximum Input Voltage	AC:600V,DC:600V		
Maximum Input Current	AC:10A,DC:10A		
Input Impedance	10MΩ		
Measurement Item	Range	Precision	Resolution
DC Voltage	400mV	± (1%+2)	100μV
	4.000V		1mV
	40.00V		10mV
	400.0V		100mV
	600.0V		1V
	Overload protection: 400mV: 250V, other: 600Vrms.		
AC Voltage	4.000V	± (1.2%+5)	1mV
	40.00V		10mV
	400.0V		100mV
	600.0V	± (1.5%+5)	1V
	Frequency: 40Hz~400Hz		
	Frequency of 400V and 600V: 40Hz~100Hz		
DC Current	40.00mA	± (1%+2)	10μA
	200.0mA	± (1.5%+2)	100μA
	4.000A	± (1.8%+2)	1mA
	10.00A	± (3%+2)	10mA
	Overload protection: self restoring fuse: 200mA/250V, 4A and 10A range no fuse		
AC Current	40.00mA	± (1.3%+2)	10μA
	400.0mA	± (1.8%+2)	100μA
	4.000A	± (2%+3)	1mA
	10.00A	± (3%+5)	10mA
	Frequency: 40Hz~400Hz;		
	Self restoring fuse: 200mA/250V, 4A and 10A range no fuse.		
Resistance	400.0Ω	± (1%+3)	0.1Ω
	4.000KΩ	± (1.2%+5)	1Ω
	60.00KΩ		10Ω
	400.0KΩ		100Ω
	4.000MΩ		1KΩ
	40.00MΩ	± (1.5%±3)	10KΩ
	Overload protection: 220Vrms		

Capacitance	40.00nF	± (3%+5)	10pF
	400.0nF		100pF
	4.000μF		1nF
	40.00μF		10nF
	100.0μF		100nF
	Overload protection: 220Vrms		
Diode	0V~1.0V		
On off Measurement	<50Ω		
General Specifications			
Panel Type	7 "TFT LCD		
Display Resolution	800 (horizontal) *480 (vertical) pixels		
Display Type	Point, Vector		
Waveform Brightness	Adjustable		
Grid Types	Solid line, Dotted line, None		
Grid Brightness	Adjustable		
Screen Brightness	Adjustable		
Afterglow	1s、5s、10s、30s、Infinite, Off		
Standard Interface	USB Host、USB Device		
Power Supply	AC 100 ~ 240V, 50 ~ 60Hz; DC input 5V3A/9V2A/12v1.5A		
Power Consumption	<8W		
Fast Charge	Support fast charging		
Battery	3.7V 2600mAh*4 in parallel		3.7V 2600mAh*2 in parallel
Environmental			
Temperature	0°C-50°C		
Storage Temperature	-20°C-60°C		
Humidity	≤+104°F（≤+40°C）: ≤90% relative humidity		
	106°F~122°F（+41°C~50°C）:≤60% relative humidity		
Cooling	Convection		
Altitude	Operating and Nonoperating	3,000m（10,000 feet）	
	Random vibration	0.31g_{RMS} from 50Hz to 500Hz, 10 minutes on each axis	
	Nonoperating	2.46g_{RMS} from 5Hz to 500Hz, 10 minutes on each axis	
Mechanical			
Dimension	248mm*176mm*54mm (L x W x H)		
Weight	1.2KG (including batteries)		