

Specification

Scope			
Type	SHS1062	SHS1102	
Bandwidth	60MHz	100MHz	
Rise Time	≤5.8ns	≤3.5ns	
Real Time Sampling Rate	Single Channel: 1GSa/s, Double Channels: 500MSa/s	Single Channel: 1GSa/s, Double Channels: 500MSa/s	
Equivalent Sampling Rate	50GSa/s	50GSa/s	
Memory Depth	2Mpts	2Mpts	
Time Base Range	5 ns/ div – 50s/ div	2.5ns/ div – 50s/ div	
Scan Range	100ms/ div ~ 50s/ div	100ms/ div ~ 50s/ div	
Vertical Sensitivity	5mV/div – 100V/div(1-2-5 order)	5mV/div – 100V/div(1-2-5 order)	
Vertical Resolution	8 bits	8 bits	
Trigger Types	Edge, Pulse, Video, Slope, Alternative	Edge, Pulse, Video, Slope, Alternative	
Frequency Counter	6 bits	6 bits	
Connection	USB Device, USB Host	USB Device, USB Host	
Math	+, -, *, /, FFT	+, -, *, /, FFT	
Oscilloscope Trend Plot	800K points		
Meter			
Maximum Resolution	6000		
Function	Range	Resolution	accuracy
DC Voltage	60.00 mV	10uV	(±1%±15digit)
	600.0mV	100uV	(±1%±5digit)
	6.000V	1mV	
	60.00V	10mV	
	600.0V	100mV	
	1000 V	1V	
AC Voltage (20Hz~400Hz)	60.00 mV	10uV	(±1%±15digit)
	600.0mV	100uV	(±1%±5digit)
	6.000V	1mV	
	60.00V	10mV	
	600.0V	100mV	
	750 V	1V	
DC Current ^[1]	60.00 mA	10uA	(±1.5%±5digit)
	600.0mA	100uA	
	6.000 A	1mA	(±2%±5digit)
	10.00 A	10mA	
AC Current ^[2] (20Hz~400Hz)	60.00 mA	10uA	(±1.5%±5digit)
	600.0mA	100uA	(±2%±5digit)
	6.000 A	1mA	(±3%±5digit)
	10.00 A	10mA	

Note: [1],[2] For rank A range, the measurement time should be less than 10s, the interval time should be more than 15 minutes.

Resistance	600.0Ω	0.1Ω	(±1%±5digit)
	6.000KΩ	1Ω	
	60.00KΩ	10Ω	
	600.0KΩ	100Ω	
	6.000MΩ	1kΩ	(±3%±5digit)
	60.00MΩ	10kΩ	
Capacitance	40.00nF	0.01nF	(±3%±10digit)
	400.0nF	0.1nF	(±4%±5digit)
	4.000uF	1nF	
	40.00uF	10nF	
	400.0uF	100nF	
Diode	0~2V		
Continuity	<50Ω Buzzer sounds		

Technical Specifications

Oscilloscope

Acquisition System	
Sampling Types	Real time, Equivalent
Sampling Mode	Sampling, Peak detection, Average
Average Times	4, 16, 32, 64, 128, 256

Input System		
Input Coupling	AC, DC, GND	
Input Impedance	1MΩ±2%, 18pf±3pf	
Probe Attenuation Factor	10X	
Probe Attenuation Factors Set(V)	1X, 5X, 10X, 50X, 100X, 500X, 1000X	
channels from earth ground, between two channels references	Overvoltage Category	Maximum Voltage
	CAT I&CAT II	1000Vrms
	CAT III	600Vrms
between Multimeter input reference and the ground	Overvoltage Category	Maximum Voltage
	CAT I&CAT II	600Vrms
	CAT III	300Vrms
Max. input Voltage for BNC	Overvoltage Category	Maximum Voltage
	1x CAT I&CAT II	300Vrms
	1x CAT III	150Vrms
	10x CAT I&CAT II	1000Vrms
	10x CAT III	600Vrms
Max. input Voltage for Multimeter input port	Voltage port	DC 1000V, AC 750V
	Current port(mA)	AC 250V/10A

	Current port(A)	AC 250V/600mA
Single Channel Common Mode Rejection, typical	>100:1 50MHz	
Channel-to-Channel Isolation	>35dB	

Horizontal System				
Real time Sample Rate	Single Channel :50Sa/s~1GSa/s Double Channels: 500MSa/s			
Equivalent Sample Rate	50GSa/s			
Interaction Mode	Line, (Sinx)/x			
Memory Depth	Channel Mode	Sample Rate	Normal	Deep
	Single Channel	1Gsa/s	40kpts	nonsupport
	Single Channel	≤ 500MSa/s	20kpts	2Mpts
	Double Channels	≤ 500MSa/s	20kpts	1Mpts
Display Mode	MAIN, WINDOW, ZOOM, SCAN, X-Y			
Time Base Accuracy	±50ppm (measured over 1ms interval)			
Horizontal Scan Range	2.5ns/div – 50s/div(SHS1000) Scan mode: 100ms/div ~ 50s/div (1-2.5-5 order)			

Vertical System	
Vertical Sensitivity	5mV/div – 100V/div(1-2-5 order)
Channel Voltage Offset Range	5mV-200mV: ±1.6V 206mV-10V: ±40V 10.2V-100V: ±400V
Vertical Resolution	8 bit
Channels	2
Analog Bandwidth	100MHz (SHS1102) 60MHz(SHS1062)
Single Bandwidth	100MHz (SHS1102) 60MHz(SHS1062)
Lower Frequency(AC-3dB)	≤10Hz (at input BNC)
DC Gain Accuracy	5mv/div-100v/div:≤±3%
DC Measurement Accuracy≤100mv/div	±[3.0%X(reading + offset)+1% X offset +0.2div+2mV]
DC Measurement Accuracy > 100mv/div	±[3.0%X(reading + offset)+1% X offset +0.2div+100mV]
Rise Time	<3.5ns (SHS1102) <5.8ns (SHS1062)
Vertical Input Coupling	AC, DC, GND
Math Operation	+, -, *, /, FFT
FFT	Window Mode: Hanning, Hamming, Blackman, Rectangular
	Sampling: 1024 points
Bandwidth Limiter	20MHz (-3dB)

Trigger System	
Trigger Types	Edge, Pulse Width, Video, Slope, Alternative
Trigger Source	CH1, CH2
Trigger Modes	Auto, Normal, Single
Trigger Coupling	AC, DC, LF rej, HF rej
Trigger Level Range	CH1, CH2: ± 6 divisions from center of screen
Trigger Displacement	Pre-trigger: (Memory depth/(2*sampling)), Delay Trigger: 268.04div
Holdoff Range	100ns – 1.5s
Edge Trigger	Edge Type: Rising, Falling, Rising and Falling
Pulse Width Trigger	Trigger Modes: (>, <, =) Positive Pulse Width, (>, <, =)Negative Pulse Width
	Pulse Width Range: 20ns – 10s
Video Trigger	Support Signal Formats: PAL/SECAM, NTSC
	Trigger Condition : Odd Field, Even Field, All Lines, Line Num
Slope Trigger	(>, <, =) Positive slope, (>, <, =) Negative slope
	Time: 20ns-10s
Alternative Trigger	CH1 Trigger Type: Edge, Pulse, Video, Slope
	CH2 Trigger Type: Edge, Pulse, Video, Slope

X-Y Mode	
X-Pole Input /Y-Pole Input	Channel 1 (CH1) / Channel 2 (CH2)
Sample Frequency	XY mode has a breakthrough that trad oscilloscopes restrict sampling rate at 1MSa/s and supports 5Ksa/s~500MSa/s:

Measure System	
Auto Measure (32 Types)	Vpp, Vmax, Vmin, Vamp, Vtop, Vbase, Vavg, Mean, Crms, Vrms, ROVShoot, FOVShoot, RPRESshoot, FPRESshoot, Rise time, Fall time, Freq, Period, + Wid, –Wid, +Dut, –Dut, BWid, Phase, FRR, FRF, FFR, FFF, LRR, LRF, LFR, LFF
Cursor Measure	Manual mode, Track mode and Auto mode

Control Panel Function	
Auto Set	Auto adjusting the Vertical, Horizontal system and Trigger Position
Save/Recall	Support 2 group referenced waveforms, 20 group setups, 10 group captured waveforms internal storage/recall function and USB flash driver storage function.

Hard Ware Frequency Counter	
Reading Resolution	1Hz
Range	DC Couple, 10Hz to MAX Bandwidth
Signal Types	Satisfying all Trigger signals(Except Pulse width trigger and Video Trigger)

Multimeter

Maximum Resolution	6000 counts
Measure Function	DCV, ACV, DCI, ACI, Resistance, Diode, Capacitance, Continuity
Max Input Voltage	AC(Vrms): 750V (AC frequency :20Hz~400Hz)DC :1000V
Max Input Current	AC (Vrms) : 10A (AC frequency :20Hz~400Hz)DC : 10A
Impedance	10MΩ

Recorder

Scope TrendPlot	
Display	All, Normal
Record Size	800K points, more than 24 hours
Record Channel	2 channels
Cursor, Zoom	Yes
Manual Mode	Yes

Meter TrendPlot	
Display	All, Normal
Record Size	1.2M points
Record Channel	1 channel
Cursor, Zoom	Yes
Manual Mode	Yes

Scope Record	
Function	Record scope waveforms, Replay recorded waveforms
Acquisition Mode	Scan Mode
Time	Record mode: recording time Replay mode: replay time
Sets	Viewer: full screen, split screen Record mode: continuous, single Replay mode: point, frame Save mode: Internal memory
Default	Viewer: split screen Record mode: continuous Replay mode: point Save mode: Internal memory
Record Size	Total: 7M points Single channel: 7M points single channel Double channels: 3.5M points per channel At different time base, get max record time , e.g. time base 100ms, each point counts 0.04ms, Total Time = 7000000*0.04ms = 4.6min
Record Manual	Start, Pause, Stop, Continue
Replay Manual	Start, Pause, Stop, Continue, Previous, Next,

Generic Specification

Display System	
Display Mode	5.7 inch TFT color LCD
Resolution	320 horizontal by 234 vertical pixels
Display Color	24 bit
Display Contrast	150:1
Backlight Intensity	300nit
Waveform Display Range	8 x 12 div
Waveform Display Mode	Point, Vector
Persist	Off, 1 sec, 2 sec, 5 sec, Infinite
Menu Display	2 sec, 5 sec, 10 sec, 20 sec, Infinite
Screen-Saver	Off, 1min, 2min, 5min, 10min, 15min, 30min, 1hour, 2hour, 5hour
Skin	Classical, Modern, Tradition, Succinct
Waveform Interpolation	Sinx, X
Color model	Normal , Invert
Language	Simplified Chinese, Traditional Chinese, English, Arabic, French, German, Russian, Spanish, Portuguese, Japanese, Korean, Italian

Power		
Line Power Adapter	Input voltage	100V-240V 50/60Hz
	Output voltage	9V 4A
Battery	7.4VDC, 5000mAh, persisting about 4 hours	
Charge time	About 4 hours	

Environments		
Temperature	Operating	0~45℃
	Storage	-20℃~70℃
Cooling	Internal fan used	
Humidity	85%RH, 40℃	
Height	3000m	
Electromagnetic Compatibility	2004/108/EC Directive	
	Applicable standards EN 61326-1:2006	
	EN 61000-3-2:2006 + A2:2009/ EN 61000-3-3:2008	
Safety	2006/95/EC Low Voltage Directive	
	EN 61010-1:2010/EN 61010-031:2002+A1:2008	

Mechanical		
Size	length	259.5mm
	width	163.2mm
	height	53.3mm
Weight	1.5Kg	

Type Selections:

NAME:

SHS1000 series Handheld Digital Oscilloscope

TYPE:

SHS1102 100MHz

SHS1062 60MHz

Standard accessories:

A 9V, 3A, power adapter

Two special 10: 1, CATII 1000V, CATIII 600V, 100MHz oscilloscope probes

Two test leads for multimeter

A USB data transmitting cable

Quick Start

A service warranting card

A CD of Easyscope used for PC control