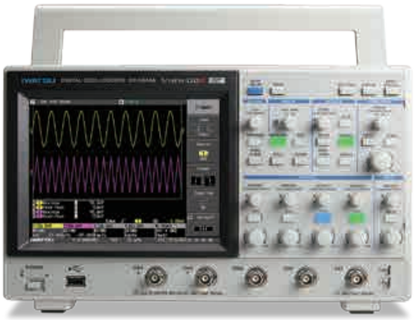
Digital Oscilloscope ViewGo II

New DS-5600A Series
DS-5400A Series

3-year warranty
when registered as a web user

Commonly-used Functions Enhanced



4-channel model DS-5654A

4-channel model DS-5424A

DS-5600A Series

500MHz 4ch 2GS/s Max 5M points	DS-5654A
500MHz 2ch 2GS/s Max 5M points	DS-5652A
350MHz 4ch 2GS/s Max 5M points	DS-5634A
350MHz 2ch 2GS/s Max 5M points	DS-5632A
200MHz 4ch 2GS/s Max 5M points	DS-5624A
200MHz 2ch 2GS/s Max 5M points	DS-5622A
100MHz 4ch 2GS/s Max 5M points	DS-5614A
100MHz 2ch 2GS/s Max 5M points	DS-5612A

DS-5400A Series

200MHz 4ch 2GS/s 500k points	DS-5424A
200MHz 2ch 2GS/s 500k points	DS-5422A
100MHz 4ch 2GS/s 500k points	DS-5414A
100MHz 2ch 2GS/s 500k points	DS-5412A

NEW FUNCTIONS

DS-5600A New Functions

- *Supports 50Ω Inputs for all models*

  This function can employ a wide variety of probes.
- *Supports AUX OUT as a standard function*

  In addition to Trigger Signal Output, the result can be output at the Pass or Fail timing with Pass/Fail judgment function.
- *Displays performed averaging count*

  This function displays how many times the averaging was performed, during the averaging stage.
- *Displays each bit of Max.12 bits at High resolution mode*

  Measuring status can be recognized at a glance during the high resolution operation.
- *Enable/Disable Auto-setup*

  This function locks the configurations and prevents unintentional change in Panel settings even when Auto-setup button is miss-operated. This is useful for educational purpose.

DS-5400A New Functions

- *Supports PNG format*

  Transparency attributes can be saved when the PNG format is selected and the charts can be layered in documents.
- *Supports Max. Sampling rate 2GS/s for all models*

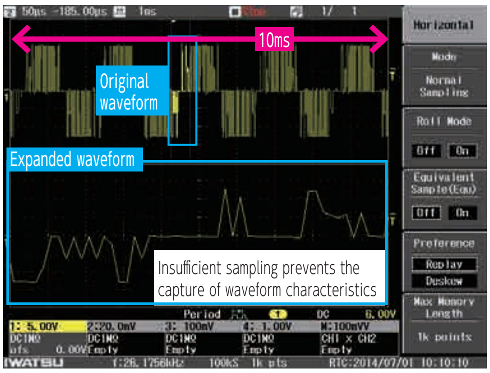
  Sampling rate 2GS/s is available when 2 channels are interleaved.

* We accept requests for calibration certificates, traceability network diagrams and inspection results on a chargeable basis.

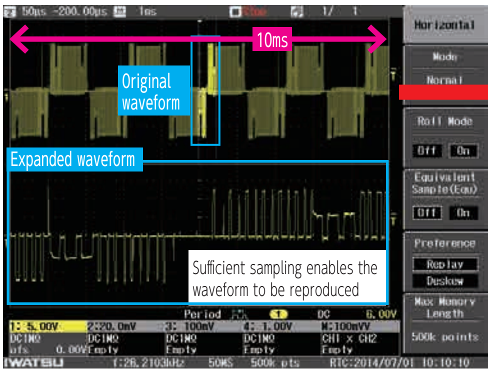
Long Memory up to a Maximum of 5M points DS-5600A Series

[2.5M points/CH when all channels being used]
(Maximum of 500k/CH with the DS-5400A Series)

Enables long-term waveforms to be captured while maintaining high-speed sampling.



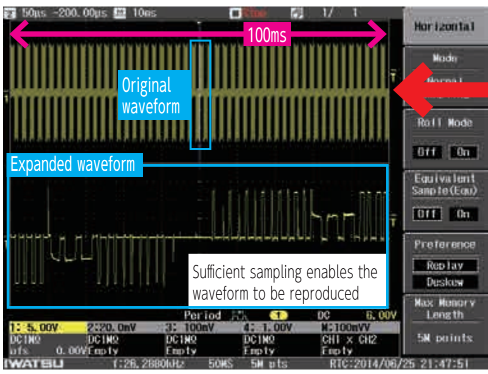
Memory Length: 1k points
Sampling Rate: 100kS/s



Memory Length: 500k points
Sampling Speed: 50MS/s

Waveform Capture Time x 10

The long memory is able to reproduce an even longer waveform capture time to ensure that the entire waveform is acquired so that it can be proportionally checked later.



Memory Length: 5M points
Sampling Speed: 50MS/s

Maximum Sampling Rate for the Waveform Capture Time (DS-5600A Series)

Waveform Capture Time	5M points when the channels are interleaved	2.5M points when all channels are in use
1s	5MS/s	2.5MS/s
100ms	50MS/s	25MS/s
10ms	500MS/s	250MS/s
2ms	2GS/s	1GS/s
1ms	2GS/s	1GS/s

Waveform Capture Time: The s/div x 10div time on the time axis range at the width of the time axis displayed on the oscilloscope.

Probe Selection Function DS-5600A Series DS-5400A Series

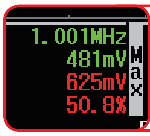
Selecting probes manufactured by Iwatsu enables attenuation ratios and coupling to be automatically set. The model number, bandwidth of the vertical range and input coupling are displayed.

Eligible Probes

Current Probes:	SS-280A Series, SS-240A, SS-250, SS-260, SS-270
Voltage Probes:	SS-320, SFP-5A, SFP-4A, HV-P30A, HV-P60A, etc.

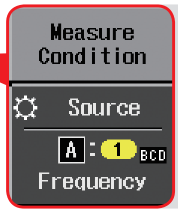
Four Waveform Parameter Simultaneous Judgment / Waveform Mask Judgment Functions DS-5600A Series

Pass/Fail judgment will be carried out automatically on masks and waveform parameters. Performing this on four parameters simultaneously enables strict conditions to be set.



Pass
Pass
Fail
Fail

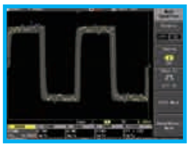
NEW
Pass parameters displayed in green, and Fail parameters displayed in red.



It is possible to perform judgment on a maximum of four waveform parameters set between A and D simultaneously.

Pass/Fail Judgment

Mask Judgment

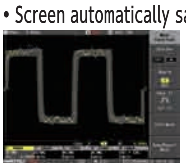


Parameter Judgment

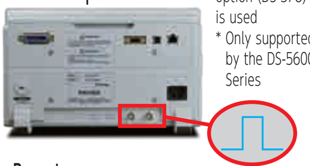
Operations during Pass/Fail Judgment

- Waveform capturing halted
- Data automatically saved

- Screen automatically saved.



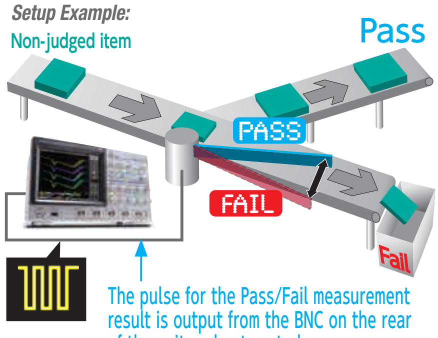
- Pulse output



When the AUX I/O option (DS-578) is used
* Only supported by the DS-5600A Series

- Beep tone

Setup Example:



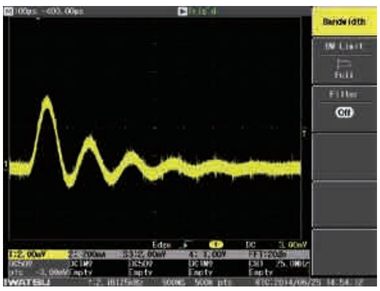
The pulse for the Pass/Fail measurement result is output from the BNC on the rear of the unit and automated.

Reinforced Noise Reduction Functions DS-5600A Series

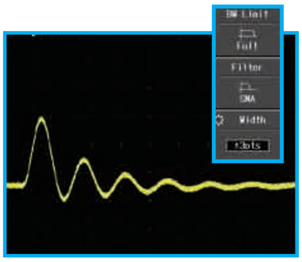
Simple Moving Average

The Simple Moving Average (SMA) enables smoothing and noise reduction at the sampling points of the specified width, through the digital filters that can be set for each channel.

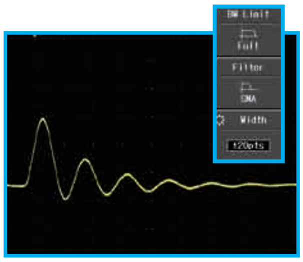
This can also be used on non-repetitive single signals.



SMA: When OFF



SMA: When ON: Width = ± 3pts

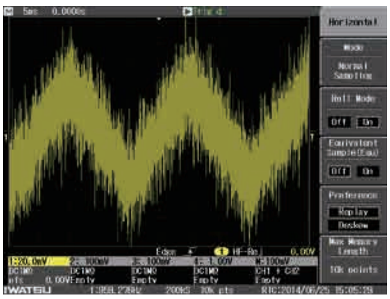


SMA : When ON: Width = ± 20pts

Averaging Count Increased

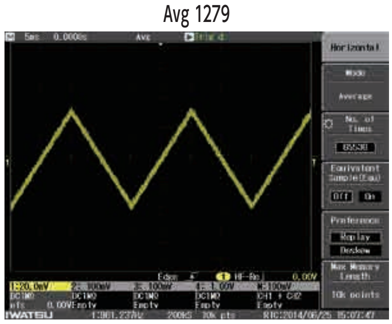
The averaging count setting has been increased from 256 times to 65,536 times. This enables non-synchronized random noise signals to be effectively reduced from measured repetitive signals.

- When the amplitude ratio for the signal (triangular wave: 50Hz) and noise (random) is 1:1
- The example of the right shows a measurement with the sampling speed set at 200kS/s and the memory length set at 10k points.



Averaging process OFF

Avg 1279

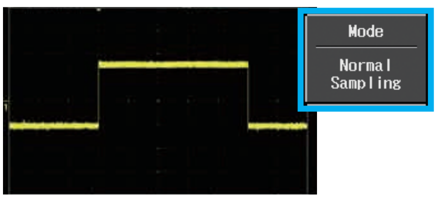


Averaging process ON (averaging count at 65,536)

High Resolution

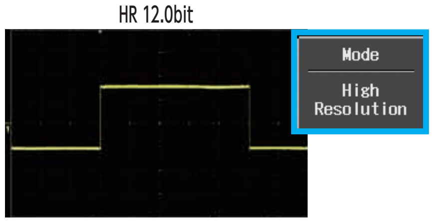
When measurements are taken at a sampling speed lower than the maximum sampling speed, it is possible to average the data captured at the maximum sampling speed, capture the waveforms, reduce random noise, and increase vertical resolution to a level equivalent to a maximum of 12 bits.

This can also be used on non-repetitive single signals.



Normal Sampling
(Sampling speed of 5MS/s, voltage range of 2mV/div)

HR 12.0bit

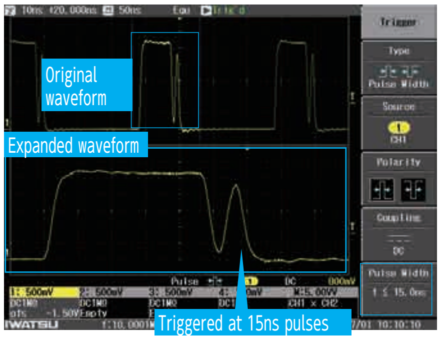


When resolution is the equivalent of 12-bit high resolution
(Sampling speed of 5MS/s, voltage range of 2mV/div)

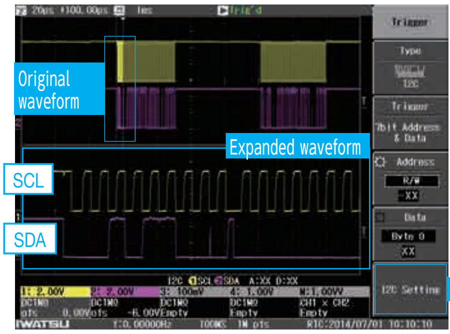
Improved Trigger Functions DS-5600A Series DS-5400A Series

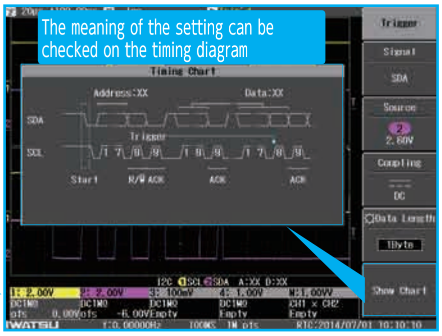
The trigger function has been reinforced so that waveforms can be triggered with optimal conditions, even for complex logic signals and serial data signals.
Complex settings performed with pattern triggers can be smoothly set with the use of touch screen operations.

Trigger Types	DS-5600A	DS-5400A
Edge ALT, Edge OR	✓	
Cycle, Pulse width, Dropout, Edge, Pulse count, TV	✓	✓
Pattern	✓	
Serial (UART, SPI, I^2C)	✓	

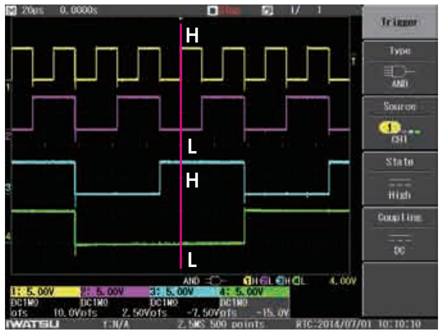


Pulse Width Trigger
(Example: Detecting abnormal waveforms caused by glitches, etc.)





Serial Trigger
(Example: Observing I^2C signals on the serial control bus)



Pattern Trigger
(Example: Counter logic output signal)

Waveform Calculation Function DS-5600A Series DS-5400A Series

Adds, subtracts and multiplies two waveforms, and performs frequency analysis (FFT) on channel waveforms.
The DS-5600A Series supports differential and integral calculations.
The calculated waveforms can be saved as data, and can be set as the source for the automatic measurement of waveform parameters.

NEW ***Supports double calculations***
(DS-5600A Series)
In addition to the results of addition, subtraction and multiplication, this function also supports the double calculation of FFT, differential calculus and integral calculus.

CH Waveforms	Single Operations	Double Operations
1 to 4CH (4CH unit) 1 to 2CH (2CH unit) 2CH among the above	Addition Subtraction Multiplication	FFT Differential calculus Integral calculus
1 to 4CH (4CH unit) 1 to 2CH (2CH unit) 1CH among the above	FFT Differential calculus Integral calculus	
DS-5600A	✓	✓
DS-5400A	✓ (Excluding differential calculus and integral calculus)	

[Examples of Usage]

- Addition/Subtraction: Evaluation of differential signals
- Multiplication: Evaluation of power waveforms from Voltage x Current
- FFT: Analysis of cyclic noise and vibrations, etc., in frequency domains

Supported by the DS-5600A Series

Differential calculation waveforms for square waveforms (rising 50ns, falling 100ns)
(Displays the size of the time fluctuations (dv/dt) for square waveform edges.)

Supported by the DS-5600A Series

Integral calculation waveforms for square waveforms
(Displays the results of integral calculus by time (∫ vdt) for the area of square waveforms.)

Measuring Differential Serial Signals

Frequency spectrum analysis (FFT calculations of switching voltage waveforms).

Remote Control

Enables vast amounts of data to be collected and high-level analysis to be carried out on PCs.

■ *Scope Viewer (Supplied with Iwatsu Test Instruments Tools)*

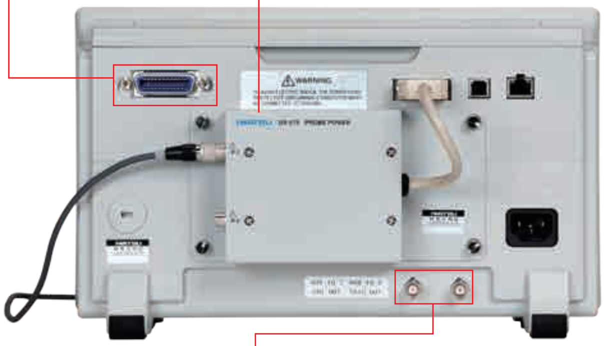
Download the Iwatsu Test Instruments Tools (free of charge) from the Iwatsu website download page to enable the use of utility software for easily controlling ViewGo Ⅱ remotely.
Functions: Oscilloscope operations, cursor measurement, waveform data file output, screen hard copies, printing, etc.

Optional Accessories
* DS-576, 577, 578 and IE-1226 are factory-delivered options, so it is necessary to specify them when place your order.

GPIB Interface
DS-576

AUX I/O Option (2-way probe power source option)
DS-579
Can be used as a power source for probes
Supported Models: SS-240A/SS-250/SS-260/SS-270/SS-320/SFP-5A/SFP-4A

Rear of DS-5654A

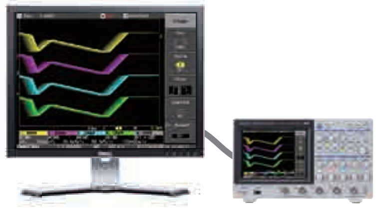


AUX I/O Option (CH1/CH2 Output)
DS-577

AUX I/O Option (CH1/TRIG Output)
DS-578
* DS-5600A Series only
* The DS-577 and DS-578 cannot be mounted together.

VGA Video OUT
IE-1226 Made to order
VGA output on external displays for ViewGo II is possible. In the inspection lines of factories, the efficiency will be improved and in schools, the image onto a large projector screen can be shown.

* The DS-579 cannot be used after the IE-1226 has been mounted.



Photograph of the Rear

Recommended for ViewGo II
Carrying Bag
Models Supported
•DS-5600ASeries
•DS-5600Series
•DS-5500ASeries
•DS-5500Series
•DS-5400ASeries
•DS-5400Series

Probe Accessories
*The specifications here show the individual characteristics of each probe.(Contact our sales or distributor for details.)

Standard Probe
SS-0130R
Frequency BW: DC to 200MHz
Input RC: 10MΩ//12.5pF
Attenuation Ratio: 10:1
Length: 1.5m

SS-101R
Frequency BW: DC to 500MHz
Input RC: 10MΩ//12pF
Attenuation Ratio: 10:1
Length: 1.2m

High-Voltage Probe
SS-0170R
Frequency BW: DC to 400MHz
Maximum Input Voltage: 6kV (DC+ACpk, CAT I)
Input RC: 66.7MΩ± 1%//4pF or less
Attenuation Ratio: 100:1,
Cable Length: 2m

SS-0171R
Frequency BW: DC to 400MHz
Maximum Input Voltage: 4kV(DC+ACpk, CAT I)
Input RC: 66.7MΩ± 1%//4pF or less
Attenuation Ratio: 100:1,
Cable Length: 2m

High-Voltage Probe
PHV/PHVS Series

Type	BW	Length	Attenuation Ratio	Maximum Input Voltage AC rms (CAT II)	Maximum Input Voltage Impulse peak
PHV1000-RO	400MHz	2m	100:1	1kV	4kV
PHVS1000-RO	400MHz	2m	1000:1	1kV	6kV
PHV641-LRO	380MHz	1.2m	100:1	2kV	4kV
PHV642-LRO	300MHz	2m			
PHV643-LRO	150MHz	3m			
PHV661-LRO	380MHz	1.2m	100:1	2.8kV	6kV
PHV662-LRO	300MHz	2m			
PHV663-LRO	150MHz	3m			
PHVS662-LRO	400MHz	2m	1000:1	2.8kV	6kV
PHVS663-LRO	250MHz	3m			

* Contact us with regard to specifications not listed

High-Voltage Probe
HV-P30A
30kV DC+AC peak or single-pulse 40kV

HV-P60A
60kV DC+AC peak or single-pulse 80kV
* Check the de-rating characteristics of the high-voltage probes before selecting them.

High-Voltage Differential Probe
SS-320
DC to 100MHz (1kVrms)

FET Probe

Model	Attenuation	Input RC	Bandwidth
SFP-5A	10:1	Approx. 1.9pF, Approx. 1MΩ	DC to 1GHz
SFP-4A	10:1	Approx. 2.15pF, Approx. 1MΩ	DC to 800MHz
PS-25	Power supply for SFP-4A, SFP-5A and SS-320 (Input voltage AC100V only)		

SFP-5A

PS-25

Current probe (Clamp type)
SS-250
Frequency Bandwidth : DC to 100MHz(-3dB), Maximum input range : 30A rms,
Maximum peak current : 50A peak, Measurable wire diameter : ϕ 5mm

SS-240A
Frequency Bandwidth : DC to 50MHz(-3dB), Maximum input range : 30A rms,
Maximum peak current : 50A peak, Measurable wire diameter : ϕ 5mm

SS-270
Frequency Bandwidth : DC to 2MHz(-3dB), Maximum input range : 500A rms,
Maximum peak current : 700A peak, Measurable wire diameter : ϕ 20mm

SS-260
Frequency Bandwidth : DC to 10MHz(-3dB), Maximum input range : 150A rms,
Maximum peak current : 300A peak, Measurable wire diameter : ϕ 20mm

PS-26 *Power Source for Current Probes*
Power supply for SS-240A, SS-250, SS-260 and SS-270(Input voltage AC100V(AC120V/AC200V/AC220V are factory- delivered options.)

Rogowski Coil Current Probe
SS-280A Series

ex. probe on TO-220 package

Model	BW(-3dB)	Maximum current
SS-281A	110Hz to 30MHz	30A peak
SS-282A	65Hz to 30MHz	60A peak
SS-283A	32Hz to 30MHz	120A peak
SS-284A	9Hz to 30MHz	300A peak
SS-285A	6Hz to 30MHz	600A peak
SS-286A	3Hz to 30MHz	1,200A peak
SS-287A	2Hz to 30MHz	3,000A peak
SS-288A	2Hz to 30MHz	6,000A peak
SS-289A	2Hz to 30MHz	12,000A peak

Common to all SS-280A series

Item	Specifications
Cable length	1.5m
Sensor Coil length	80mm
Sensor Coil wire diameter	ϕ 1.7mm
Temerature range	
Amplifier	0deg. to 40deg.
Coil&cable	-40deg. to 125deg.
Output	BNC connector
Power supply	AA battery *4pcs. or AC adaptor

*Distribution of DS-5600A series and DS-5400A series are limited in Japan and Asian markets.

DS-5600A Series Specifications

	DS-5654A	DS-5652A	DS-5634A	DS-5632A	DS-5624A	DS-5622A	DS-5614A	DS-5612A
Frequency bandwidth (-3dB)	500MHz		350MHz		200MHz		100MHz	
Rise time (Typical)	750ps		1ns		1.75ns		3.5ns	
Input Channel Count	4	2	4	2	4	2	4	2
Maximum Sampling Rate, Equivalent Sampling Rate	2GS/s (when 2 channels interleaved), 1GS/s (when all channels are in use), 100GS/s							
Peak detect resolution	1ns							
Averaging	2 to 65536 times (exponent of 2 step), Display of number of runs							
Maximum Memory Length/Vertical Resolution	5M points (when 2 channels interleaved), 2.5M points (when all channels are in use)/8-bit (When high-resolution calculation is valid: Maximum 12-bits)							
Input Voltage Range	2mV/div to 10V/div(1M Ω), 2mV/div to 2V/div(50 Ω)							
Offset Voltage	2mV/div to 50mV/div : ± 1V, 50.2mV/div to 500mV/div : ± 10V, 502mV/div to 10V/div : ± 100V							
DC Gain Accuracy	± (1.5% + 0.5% full scale)							
Maximum Input Voltage	± 400Vpeak (1M Ω), 5Vrms (50 Ω)							
Band-Limiting Filter	Analog Form: 100MHz, 20MHz, 2MHz, 200kHz Digital Form: Select either LPF, HPF or SMA, 4 independent channels				Analog Form: 20MHz, 2MHz, 200kHz Digital Form: Select either LPF, HPF or SMA, 4 independent channels			
Input Coupling/Input Impedance	GND, DC 1M Ω , AC 1M Ω , DC 50 Ω / 1M Ω ± 1% // 16pF, 50 Ω ± 1%							
Probe Sense	Automatic Detection: 1:1, 10:1, 100:1, 1000:1, Manual Settings: 1:1, 5:1, 10:1, 20:1, 50:1, 100:1, 200:1, 500:1, 1000:1, 2000:1							
Time Axis Range	500ps/div to 50s/div		1ns/div to 50s/div		2ns/div to 50s/div		5ns/div to 50s/div	
Standard Probe	SS-101R (multi-channel supplied as standard)				SS-0130R (multi-channel supplied as standard)			
Roll Mode/Clock Accuracy	50ms/div to 50s/div(100kS/s max)/ ± 10ppm							
Clock Accuracy	± 10ppm							
Trigger Function	Edge, Edge ALT, Edge OR, Pulse Count, Pulse Width, Cycle, Dropout, TV, Pattern (OR, NOR, AND, NAND), Serial (UART, SPI, I^{2}C)							
TV Trigger (Rated) / Line setting range selection / Field selection	NTSC, PAL, Custom / Up to 3,000 / 1, 2, 4, 8							
Pulse Count Trigger Setting Range / Pulse Width Trigger Time Setting Range	1 to 9,999 events/15ns to 50s							
Cycle Trigger Time Setting Range / Dropout Trigger Time Setting Range	40ns to 50s/50ns to 50s							
Pattern Trigger	OR, NOR, AND, NAND							
Trigger Source / State / Threshold Level	All Channels / HIGH, LOW, Don't Care / All Channel Independent Setting							
Serial Trigger								
UART — Trigger Selection/Bit Rate	START, STOP, Parity Error, Data Pattern/1,000bps to 1Mbps (set in units of 100bps)							
UART — Comparative Data Length / Signal Source	5 to 8 bits/CH1 to CH4, EXT (CH1, CH2, EXT for 2 channel function)							
SPI * CH1 input is reserved for SCK signal input: Maximum 20MHz — Trigger Selection/CS Selection	Data Pattern/Idling time specified when no positive logic/negative logic or CS							
SPI — Comparative Data Length / Signal Source	4 to 64 bits/CH1 to CH4, EXT (CH1, CH2, EXT for 2 channel function)							
I^{2}C — Trigger Selection/address mode	START, STOP, RESTART, NACK, Data Pattern/Selected from 7-bit / 10-bit / EEPROM read							
I^{2}C — Comparative Data Length / Signal Source	1 to 5bytes when the address is 7-bit/10-bit, 1byte when EEPROM read (with shift comparison)/CH1 to CH4, EXT (CH1, CH2, EXT for 2 channel function)							
Trigger Source	All channels, EXT (± 0.5V), EXT10 (± 5.0V), Line							
Trigger Slope / Coupling	+, - / AC, DC, High Frequency Rejection, Low Frequency Rejection, Noise Rejection							
Display / Resolution	7.5-inch Color TFT LCD (touch screen) / VGA: 640 × 480 Pixels							
Display Mode/Vector Connection / Analog Persistence	Y-T, XY, XY Trigger/Sample Point Interpolation Display, Dot Display/Monochrome Grayscale Display, Spectrum Display							
Persistence Display Time	100ms, 200ms, 500ms, 1s, 2s, 5s, 10s, infinite							
Internal Waveform Storage (REF Memory) / Front Panel Setting Storage	5 Waveforms/Possible to save five settings in the internal memory, USB memory							
AUTO SETUP function	Switchablle SETUP button Effective/Invalid							
Parameter Measurement, Cursor, Zoom, Calculation, Replay Functions								
Parameter Measurement	Maximum Value, Minimum Value, Peak-Peak, RMS, Cycle RMS, Average, Cycle Average, Top, Base, Top-Base, Rising Overshoot, Falling Overshoot, Rising Time 20-80%, Falling Time 80-20%, Rising Time 10-90%, Falling Time 90-10%, Frequency, Cycle, + Pulse Count, - Pulse Count, + Pulse Width, - Pulse Width, Duty Ratio, Integral, Skew (+, -), Skew at level							
Simultaneous Measurement Count / Statistic Value Display	Maximum 4 Parameters / Maximum Value, Minimum Value, Measurement Count							
Logging Items, Output Destination	Time, Parameter Measurement Results (Conditions A, B, C, D), Pass/Fail Judgment Results Recording Time: Pop-up menu, internal memory (maximum 86,400 records), After Recording: USB memory							
Pass/Fail Judgment	Judgment Mode: Parameter Judgment or Mask Judgment, Judgment Results: Saved on USB, Beep Tone, Pulse Output (DS-578 option required), Logging Page Search Function: Select Pass or Fail and search in ascent or descent							
Cursor/Zoom	Time, Amplitude, Time & Amplitude, Value at Cursor Position/Press the Zoom button on the front panel to display an enlarged waveform on a new grid							
Calculation Function	Addition, Subtraction, Multiplication, Differential Calculus, Integral Calculus, (FFT (maximum 8k points, rectangular, hanning, flat-top window functions) Double calculation of the results of either addition, subtraction or multiplication possible with either differential calculus, integral calculus or FFT (9 patterns)							
Rescale / Unit Conversion	A: x + b (x: Input voltage, a, b: User defined) / volt, ampere, watt, ˚ C, no display							
Replay	Automatic waveform logging, storage for a maximum of 2,048 waveforms, replay possible							
Frequency Counter	6 characters							
Interface	Supports USB 2.0HS (device, host), LAN (100Base-TX), GPIB (factory-delivered option DS76),AUX Interface (Connector for optional external connector)							
AUX OUT	Selection from Trigger output or Pass/Failure judgment							
Optional Accessories								
DS-577 AUX IO CH1/CH2 Output* (factory-delivered option)	AUX IO1: Outputs the CH1 input signal to which offset voltage has been applied, AUX IO2: Outputs the CH2 input signal to which offset voltage has been applied							
DS-578 AUX IO CH1/TRIG Output* (factory-delivered option)	AUX IO1: Outputs the CH1 input signal to which offset voltage has been applied							
DS-576 GPIB Interface (factory-delivered option)	GPIB : IEEE488.2							
Power source options for the DS-579 probe	Two-way power source for use with Iwatsu active probes							
Waveform Data Storage	Saved on the USB with binary, ASCII, Mathcad, calculation (ASCII), calculation (Mathcad)							
Hard copy Output	TIFF, BMP and PNG (supporting transparency) images saved on the USB or output to printers that support PictBridge®							
Calibration Signal Output	Square Waveform 1kHz, 3Vp-p							
Power Source / Power Consumption	AC90V to 264V(47Hz to 63Hz), AC90V to 132V(380Hz to 420Hz) / 95VA(60W)max							
Dimensions / Unit Weight	Approximately 330W x 190H x 124D mm / Approximately 3.7kg							
Guaranteed Performance Temperature	10˚C to 35˚C							
Operating Temperature / Humidity / Altitude	Temperature 0 to 40˚ C / Humidity 5% to 80% RH ≦ 30˚ C (no condensation), RH 55% or less at 40˚ C or less (no condensation) / Altitude 2,000m or less							

DS-5400A Series Specifications

	DS-5424A	DS-5422A	DS-5414A	DS-5412A
Frequency bandwidth (-3dB)	200MHz		100MHz	
Rise time(Typical)	1.75ns		3.5ns	
Input Channel Count	4	2	4	2
Maximum Sampling Rate	2GS/s (when 2 channels interleaved), 1GS/s (when all channels are in use) 1GS/s			
Equivalent Sampling Rate	100GS/s			
Peak Detect Resolution	1ns			
Averaging Function	2 to 256 times, Display of number of runs			
Maximum Memory Length	500k points/ch			
Vertical Resolution	8-bit			
Input Voltage Range	2mV/div to 10V/div			
Offset Voltage	2mV/div to 50mV/div: ± 1V, 50.2mV/div to 500mV/div: ± 10V, 502mV/div to 10V/div: ± 100V			
DC Gain Accuracy	± (1.5% + 0.5% full scale)			
Maximum Input Voltage	± 400Vpeak			
Band-Limiting Filter	Analog Form: 20MHz, 2MHz, 200kHz			
Input Coupling	GND, DC 1MΩ, AC 1MΩ			
Input Impedance	1MΩ ± 1% // 20pF ± 2PF (DC1MΩ)			
Probe Sense	Automatic Detection: 1:1, 10:1, 100:1, 1000:1, Manual Settings: 1:1, 5:1, 10:1, 20:1, 50:1, 100:1, 200:1, 500:1, 1000:1, 2000:1			
Time Axis Range	2ns/div to 50s/div		5ns/div to 50s/div	
Standard Probe	SS-0130R (multi-channel supplied as standard)			
Roll Mode	50ms/div to 50s/div (100kS/s max)			
Clock Accuracy	10ppm or less			
Trigger Function	Edge, Pulse Count, Pulse Width, Cycle, Dropout, TV			
TV Trigger (Rated) / Line setting range selection / Field selection	NTSC, PAL, Custom / Up to 3,000 / 1, 2, 4, 8			
Pulse Count Trigger Setting Range	1 to 9,999 events			
Pulse Width Trigger Time Setting Range	15ns to 50s			
Cycle Trigger Time Setting Range	40ns to 50s			
Dropout Trigger Time Setting Range	50ns to 50s			
Trigger Source	All channels, EXT (± 0.5V), EXT10 (± 5.0V), Line			
Trigger Slope / Coupling	+, - / AC, DC, High Frequency Rejection, Low Frequency Rejection, Noise Rejection			
Display / Resolution	7.5-inch Color TFT LCD (touch screen) / VGA: 640 x 480 Pixels			
Display Mode	Y-T, XY, XY Trigger			
Vector Connection	Sample Point Interpolation Display, Dot Display			
Analog Persistence	Monochrome Grayscale Display, Spectrum Display			
Persistence Display Time	100ms, 200ms, 500ms, 1s, 2s, 5s, 10s, infinite			
Internal Waveform Storage (REF Memory)	5 Waveforms			
Front Panel Setting Storage	Possible to save five settings in the internal memory, USB memory			
AUTO SETUP	Switchable SETUP button Effective/Invalid			
Parameter Measurement, Cursor, Zoom, Calculation, Replay Functions				
Parameter Measurement	Maximum Value, Minimum Value, Peak-Peak, RMS, Cycle RMS, Average, Cycle Average, Top, Base, Top-Base, Rising Overshoot, Falling Overshoot, Rising Time 20-80%, Falling Time 80-20%, Rising Time 10-90%, Falling Time 90-10%, Frequency, Cycle, + Pulse Count, - Pulse Count, + Pulse Width, - Pulse Width, Duty Ratio, Integral, Skew (+, -), Skew at level			
Simultaneous Measurement Count / Statistic Value Display	Maximum 4 Parameters / Maximum Value, Minimum Value, Measurement Count			
Cursor	Time, Amplitude, Time & Amplitude, Value at Cursor Position			
Zoom	Press the Zoom button on the front panel to display an enlarged waveform on a new grid			
Calculation Function	Addition, Subtraction, Multiplication, FFT (maximum 8k points, rectangular, hanning, flat-top window functions)			
Rescale / Unit Conversion	a * x + b (x: Input voltage, a, b: User defined) / volt, ampere, watt, ° C, no display			
Replay	Automatic waveform logging, storage for a maximum of 1,024 waveforms, replay possible			
Frequency Counter	6 characters			
AUX Interface	Supports USB 2.0HS (device, host), GPIB (factory-delivered option DS576), AUX Interface (Connector for optional external connector)			
AUX OUT	Optional external connector			
Optional Accessories				
DS-576 GPIB Interface	GPIB : IEEE488.2 (factory-delivered option)			
Power source options for DS-579 probe	Two-way power source for use with Iwatsu active probes			
Waveform Data Storage	Saved on the USB with binary, ASCII, Mathcad, calculation (ASCII), calculation (Mathcad)			
Hard copy Output	TIFF, BMP and PNG images saved on the USB or output to printers that support PictBridge®			
Calibration Signal Output	Square Waveform 1kHz, 3Vp-p			
Power Source / Power Consumption	AC90V to 264V(47Hz to 63Hz), AC90V to 132V(380Hz to 420Hz) / 95VA(60W)max			
Dimensions / Unit Weight	Approximately 330W x 190H x 124D mm / Approximately 3.7kg			
Guaranteed Performance Temperature	10˚C to 35˚C			
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∗The DS-577 and DS-578 cannot be mounted together.
* When DS-577 is in use, Trigger output (a standard function) / Pass Fail judgment function can not be used.
●External appearances and certain performance levels are subject to modification without prior notice for the purpose of product improvement, etc.

Standard Probes Supplied Accessories

	Model	DS-5654A	DS-5652A	DS-5634A	DS-5632A	DS-5624A	DS-5622A	DS-5614A	DS-5612A	DS-5424A	DS-5422A	DS-5414A	DS-5412A
Standard Probes Supplied	Quantity	4	2	4	2	4	2	4	2	4	2	4	2
	Type	SS-101R				SS-0130R							
Standard Accessories (Miscellaneous)		• Power Cord x1、• Front Panel Cover x1、• CD (containing Instruction Manual, Remote Control Manual) x1、• User Guide x1											