

High Cost-performance

The New Standard of High Resolution Digital Oscilloscope

■ Brilliant Display

Large 15.6-inch FULL HD

■ Intuitive Operation

with Touch Screen, Buttons and Knobs

■ Fast Boot-up

Approx. 30 seconds

Max. 8 Channels

High Resolution 12-bit

(High Resolution Mode 16-bit equivalent)

Max. Memory Length 120M-point as standard

High-speed Data Transfer

(15 times faster than conventional models)



Brilliant Display

Easy-to-read Measurement Parameter Display. Large Size Full HD Monitor displays waveform details.

Intuitive Operation

Comfortable operation with user-friendly Touch Screen, Buttons and Knobs.

Fast Boot-up

Quick Start-up can increase efficiency in measurement operation (Approx. 30 seconds after Turning-ON the power).



Front Panel

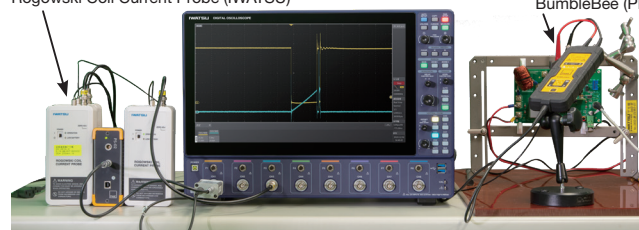
- ① 15.6-inch Large Size Touch Screen
- ② Input Channels 8CH/4CH
- ③ Probe Power Supply
for IWATSU Branded Current/High Voltage Differential Probes
- ④ Measurement Parameter Display
Max. / Min. / Ave. values for up to 8 parameters
- ⑤ ZOOM Function
Two ZOOM buttons allow to enlarge waveforms in different positions.
- ⑥ USB Host Terminal (Front 2, Left Side 1)
Mouse and keyboard can be connected.
Display Image and waveform data can be saved to USB memory.

Left Side Panel

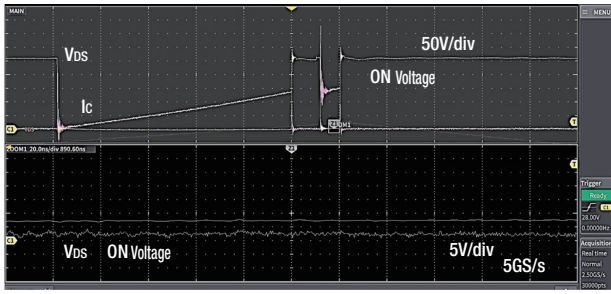
- ⑦ USB/LAN Interface
for Remote Control
- ⑧ DVI-D Interface
The screen can be output to an external display.
- ⑨ AUX OUT Terminal



Measurement Example: Switching voltage / current of GaN Device evaluation board
Rogowski Coil Current Probe (IWATSU) High Voltage Differential Probe BumbleBee (PMK)



Full-Time High Resolution 12-bit & Low Noise, Max. 16-bit equivalent (High Resolution Mode)



Enlarged waveform of Power device (GaN) switching waveform and ON voltage (VDS)

12-bit ADC

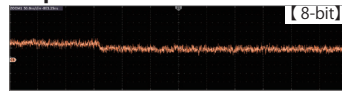
16-bit waveform display with the High Resolution Mode

Application:

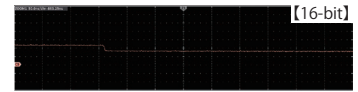
For switching waveforms (ON voltage, etc.) of a power device, lightning surge waveform observation etc.

It can be used in R&D, production and QA of automotive components and Semiconductors etc.

Comparison of Vertical Resolution



Large noises are observed when enlarged with 8-bit due to effect of low resolution.



16-bit equivalent resolution shows more details of enlarged waveform.

Analog Channel Max. 8CH



Frequency Bandwidth : 1GHz/500MHz/350MHz

Max. Sampling Rate : Max. 5GS/s (Channel Combine)

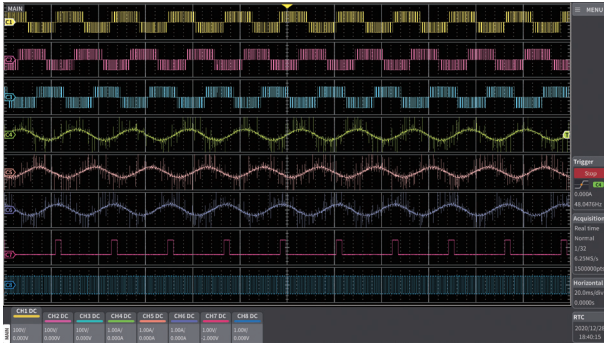
Max. 2.5GS/s (All CH)

Max. 8CH Waveform Operation (MATH)

Application:

For observation of voltage/current/sensing/ECU signal waveforms of automotive inverters, etc.

It can be used in R&D, production and QA of automobile, machine tools, robots, and production equipment.



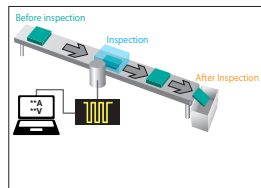
Screen display example with 8CH input

High-speed Data Transfer

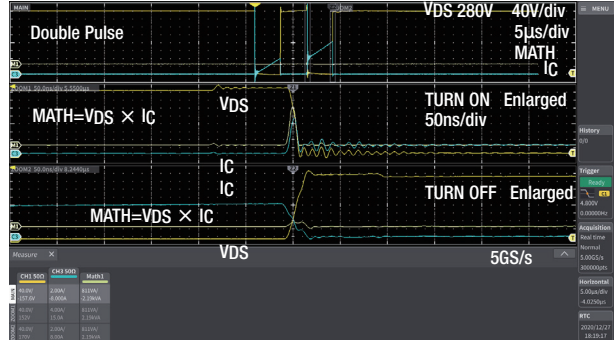
Achieved 15 times faster transfer rate than conventional models.

High-speed transfer of High resolution waveform, and measurement parameters.

- Improvement of Takt Time of production equipment
- Suitable for high-speed transfer of waveform data for simulation



Simultaneous enlargement of 2 different positions



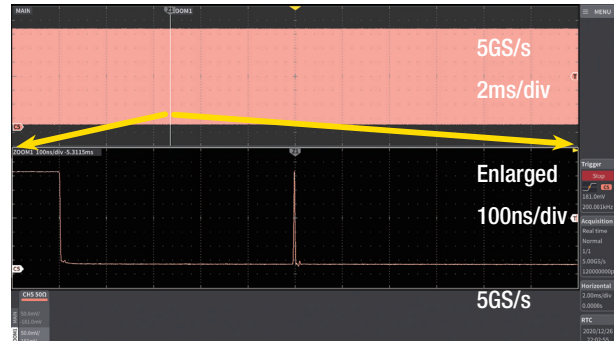
Display of enlarged Double Pulse waveform of power device (GaN) Turn-ON and Turn-OFF waveforms.

Since the waveforms of two different positions can be enlarged simultaneously, the Turn-ON and Turn-OFF losses of a power device can be observed.

Application:

For loss analysis (Double Pulse Test) of Power Devices.

Memory Length 120M-point as standard



Memory length up to 120M-point (Channels combine), 60M-point (All channels)

The Replay function (memory split display) allows to identify changes in the waveform after measurement.

Application:

For observation of Behavior of equipment after Turn-ON, Stability of a Power Converter, and Changes in waveform distortion of encoder pulses. It can be used in R&D, production and QA of automobile, machine tools, robots, and production equipment.

Also suitable for Loss analysis (Double Pulse Test) of Power Devices.

Compatible with variety of probes

DS-8000 Series can be connected to various Current and Voltage probes.



Rogowski Coil Current Probe

■ SS-280A-H Sereis

-40°C to 150°C, 30A to 12kApeak



High Voltage 400MHz Differential Probe

■ BumbleBee

Max. 2kVpeak (at 500:1)



High Voltage Probes

■ PHV Sereis

Max. 4kV peak



FET Probes

■ TETRIS Sereis

Frequency bandwidth Max. 2.5GHz

DS-8000 Sereis Specifications

Specifications	DS-8000 Sereis					
Model	DS-8034	DS-8038	DS-8054	DS-8058	DS-8104	DS-8108
Input Channels	4	8	4	8	4	8
Frequency Bandwidth	350MHz		500MHz		1GHz	
Input Impedance	50Ω ± 1.5% / 1MΩ ± 1%/16pF ± 2pF					
Input Coupling	GND, DC1MΩ, AC1MΩ, 50Ω					
Input Sensitivity	1mV to 1V/div (50Ω, 1-2-5 Sequence) 1mV to 10V/div (1MΩ, 1-2-5 Sequence)					
ADC Resolution	Real Time: 12-bit, High Resolution Mode: Max. 16-bit					
Time base Range	500ps/div to 50s/div				200ps/div to 50s/div	
Time base Accuracy	less than 10ppm					
Acquisition memory length	60M-point (All channels) / 120M-point (Channel Combine)					
Sampling Rate	5GS/s @12-bit (Channel Combine) 2.5GS/s @12-bit (All channels)					
Trigger	Edge, Edge OR, Edge Alternate, Pulse Width, Period, Pattern, Dropout Serial Trigger (UART, I2C, SPI),Sequence Trigger					
Trigger Coupling	AC, DC, HF Rej, LF Rej, Noise Rej					
Operation (MATH)	Addition, Subtraction, Multiplication, Division, Integration, Differentiation, Absolute Value, Inversion, FFT					
Parameter Measurement	Vertical Axis (12 items): Maximum, Minimum, Peak-Peak, RMS, Cycle RMS, Mean, Cycle Mean, Top, Base, Top-Base, +Overshoot, -Overshoot Horizontal Axis (14 items): Transition Time, Trise(20-80%), Tfall(80-20%), Trise(10-90%), Tfall(90-10%), Trise(Level), Tfall(Level), Frequency, Period, +Pulse Count, -Pulse Count, +Pulse Width, -Pulse Width, Duty Cycle Others (9 items): dV/dt, Integral, Integral(Absolute), Integral(Positive), Integral(Negative), Skew(%), Skew(Level), Phase(%), Phase(Level)					
Frequency Counter	Resolution: 6-digit, Frequency Bandwidth: 4Hz to 1GHz (Upper limit is limited by the frequency bandwidth of the model) Accuracy: 10ppm					
Display	15.6-inch, Full-HD (1920x1080), Electrostatic Touch Screen					
Remote Interface	LAN, USB					
Power Supply	100 to 240V AC, 50 to 60Hz					
Demensions	445 (W) x 324.6 (H) x 200 (D) mm					
Weight	Approx. 11.5kg					
Power Consumption	360VA (325W)					
Standard Accessory	Panel Cover, Power Cord, Passive Probe x 4, Instruction Manual (CD), Accessory Storage Bag					

※The products shown in this catalogue are current models at the date of publication. Design and specification are subject to change without notice for improvement.

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IWATSU

<https://www.iwatsu.com/tme>

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