

**HITACHI**  
Inspire the Next

# Scanning Acoustic Tomograph

FSP8V/FSP12V



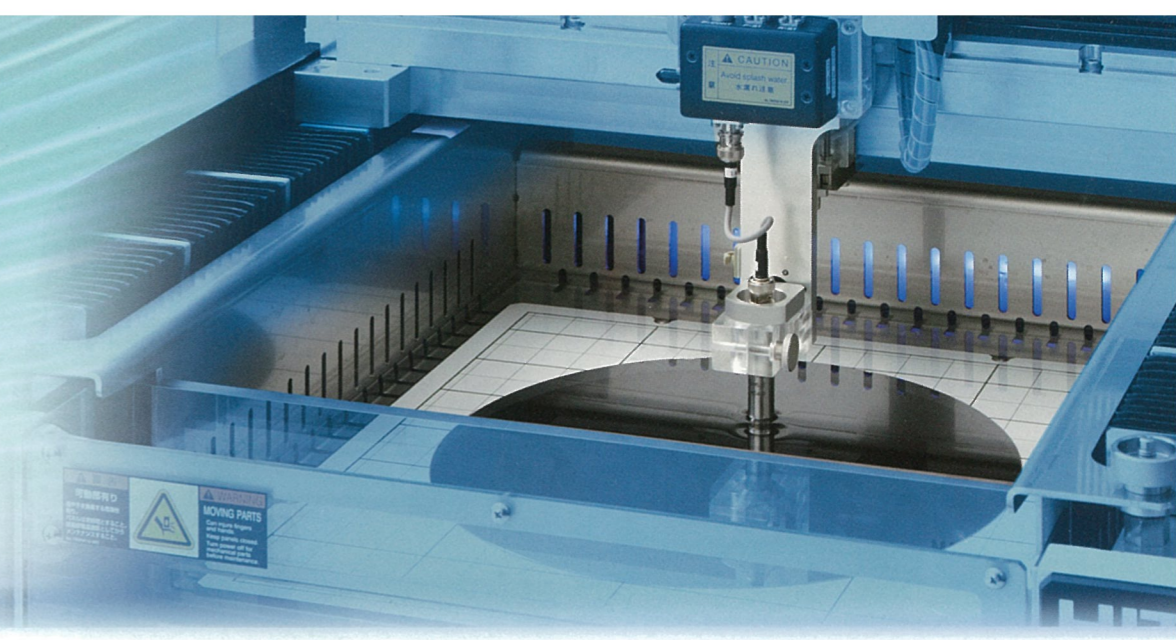
The FineSAT, which is based on the concepts of **“surer”** and **“faster,”** meets a wide range of needs from research and development to mass inspection.

 Hitachi Power Solutions Co., Ltd.

Measuring time has been reduced by up to 25%\*.  
 Realizes highly accurate and fast inspection of semiconductors  
 and electronic components.

# The birth of "FineSAT V" which incorporates leading technology.

\*Compared to our conventional models. Changes according to the conditions.



## High-Capacity

The standard specification instrument enables 400 million points of ultrasound data to be acquired.  
 By using optional specifications, this can be increased to 2 billion points.

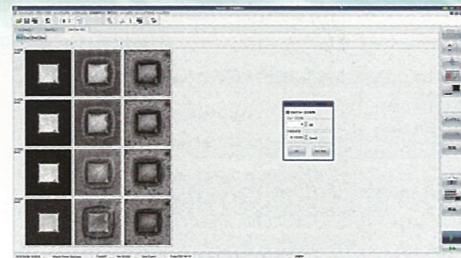
The instrument employs a 64-bit processing system, enabling it to store and process large quantities of data.  
 Wafers as large as 8 inches can be inspected by scanning them once at a fine pitch of 10 μm or less.

## High-Resolution & User-Friendly

Greatly enhanced analysis function

### High resolution waveform display

The unit of ultrasound wave measuring time can be set to 1/4 of that of the conventional instrument, enabling the resolution in the depth direction to be increased 4-fold.  
 Consequently, detection of flaws inside thin layers and separation between layers, of electronic devices which are becoming increasingly fine and multi-layered, as well as accuracy of depth position information, are improved.



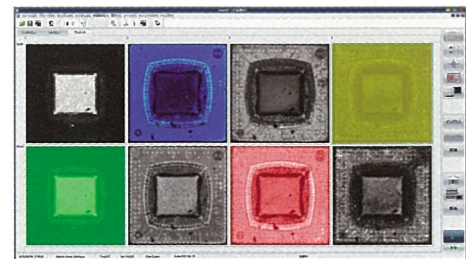
Multi-focus

### Multi-focus

The instrument incorporates a function that enables the focal point to be scanned while being varied continuously. It can produce images focused at different depths, thus preventing flaws from being overlooked.

### Multi-gate thumbnail display

Images containing different data acquired by measurement using a multi-gate method can be displayed as a list of easily selectable thumbnails.

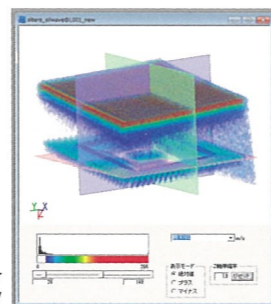


Multi-gate thumbnail display

### Overlay display (superimposition of reflection and transmission images)

By performing simultaneous measurement using the reflection method and the transmission method, the two images acquired can be displayed superimposed on each other. Also, the transmission ratio of each image can be adjusted, thus enabling the images to be set in a form that enables flaws to be easily detected.

• For measurement using the transmission method, a transmission method probe and a transmission method unit are necessary.



3D-Viewer display

### Options

- X-pixel: Compensates for deterioration of the ultrasound signal in order to create a clearer image.
- 3D-Viewer: Restores all waveform data to a 3-dimensional shape and displays it in visible form.
- Void viewer: Lists up voids (flaws), displays the area and locations, and performs an OK/NG judgment and also statistically processing.

## High-Speed

The maximum scanning speed of the scanner has been increased to 2,000 mm/s\*, thus reducing the inspection time.

The generation frequency of the ultrasound pulses is halved, and also a rigid frame is used in order to reduce vibration of the instrument.  
 A clear image can be stably acquired even at high scanning speed, thus contributing to a higher throughput.

\*Depending upon the measuring conditions, the maximum scanning speed may sometimes be restricted.

This instrument was designed taking into consideration the installation location and workability.

### Uses a flip-up type door.

The scanner door employs a flip-up type door in consideration of use in a clean room.

As an optional type of door, an antistatic type transparent panel is also available for enhanced dust prevention performance.

### The bottom window on the front face can be completely opened.

The bottom window on the front of the instrument can now be completely opened to enable samples to be set easily and the stage frame to be removed smoothly for carrying out maintenance.

### Uses an antistatic material for the control panel of the instrument.

This minimizes any untoward effect due to static electricity on the body of the operator.

### When the power is switched ON, the lifter can be operated.

The lifter can be operated without any need to start the FineSAT software.

### Employs a large 23-inch monitor.

This monitor greatly increases visibility and workability during data analysis, for example.



Antistatic control panel

Bottom window on the front face (open)

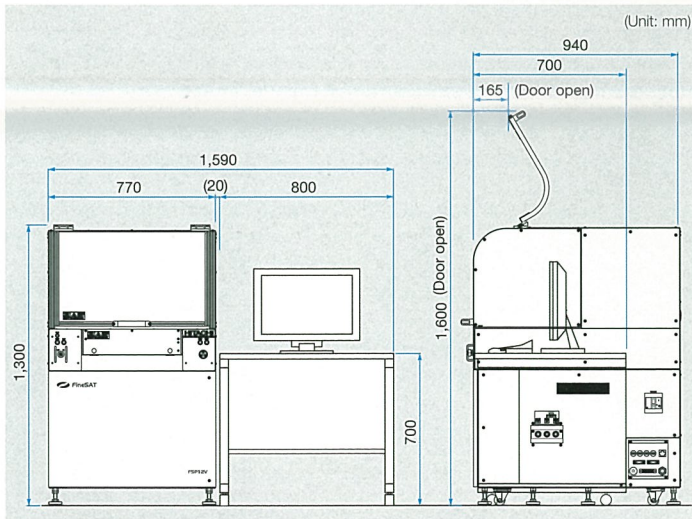
Lifter switch

## Main option equipment



\* GUIPC : Graphical User Interface PC

## Dimensional drawing (Standard specification)



## Specifications

	FSP8V	FSP12V
Probe frequency (MHz)	5 - 200	5 - 300
Maximum frequency (MHz)	500	
Effective stroke [X × Y × Z] (mm)	350 × 350 × 80	
Maximum scanning speed (mm/s)	2,000	
Maximum measurement counts (points)	Standard: 400 million When optional GUIPC is used: 2 billion	
External dimensions (Door closed) [Width, Height, Depth] (mm)	1,590 × 1,300 × 940	
Mass (kg)	Approx. 470	
Power supply [Voltage, current, frequency]	AC100 V/15 A, 50/60 Hz	

The ultrasound emitted from this product is 5 W or less, there is no need to submit notification for installation (in Japan).

We also have available an English language version of the software.



### Caution

Before operating this system, operator should thoroughly read the operation manual.

## Hitachi Power Solutions Co., Ltd.

7 Kanda Mitoshiro-cho, Chiyoda-ku, Tokyo, 101-0053 Japan Tel: +81-3-5577-8100

Contact the following for the details or sample test.  
Analysis and Inspection Systems Marketing Dept.

TEL:+81-3-5577-8175

Hours: Monday-Friday 9:00 a.m - 5:00 p.m

E-Mail: info@pis.hitachi.co.jp

For more information, contact the following:

- The image on the machine display is infixed image.  
- Product specifications may be subjected to change for improvement purposes.

URL : <http://www.hitachi-power-solutions.com/en/index.html>

PE-09

2015.12

Printed in Japan(H)