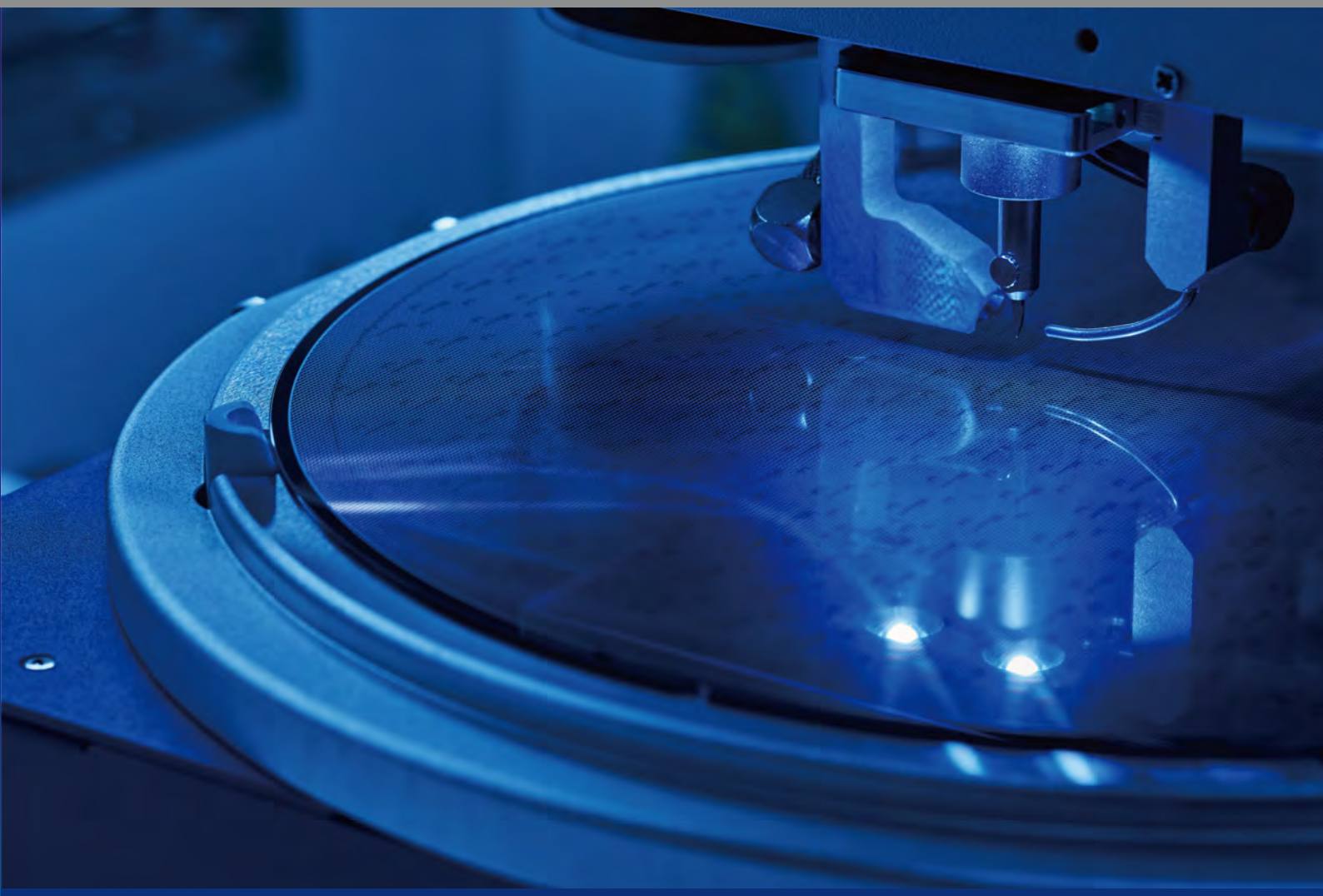
TRY PRECISION

STANDARD: BGA Bump Shear JEDEC JESD22-B117A AU Ball Shear JEDEC JESD22-B116 Ball Shear ASTM F1269 Wire Pull DT/NDT MIL STD 883



ABT2000W INTEGRA
Advanced Wafer Testing

DGFT®

ABT2000W provides the most advanced and reliable wafer testing solution in the industry. ABT2000W adopts the most advanced dynamic sensor technology, the most integrated automation control technology and the most progressive I_SEE intelligent image recognition system of the industry to test wafers from 4 inches to 12 inches, providing excellent accuracy, repeatability and result stability.

Excellent Performance

The excellent accuracy and repeatability ensure the high reliability of the test, which can accurately feedback the performance indicators of the tested sample.

Advanced Dynamic Sensor

With the high dynamic and patented VPM vertical positioning technology, it is the only equipment in the industry to achieve accurate positioning of the test principal axis without any excursion. Which also owns the unique characteristics of light contact force, positioning without horizontal excursion and accurate shearing height.

I_SEE Intelligent Image Recognition

With the intelligent image recognition system in 3 levels, it is equipped with powerful camera and optical system to achieve intelligent recognition and positioning, which is with high accuracy and repeated positioning accuracy.

Vector Shearing Test

With the vector test module of BSR series, the test angle can be automatically rotated according to the characteristics of the sample, and the vector shear can be realized through multi-axis linkage of the system.

Intelligent Digital System

The whole system has realized the digital modularization, which greatly provides the anti-jamming ability of the system and adapts to the high-density layout requirements of modern factory equipment.

Automation Test

It has realized the full automation, which can automatically complete the Wafer loading and unloading, testing, data analysis and uploading to server, image analysis and failure mode analysis and other Wafer test processes to achieve full automation, unmanned detection.

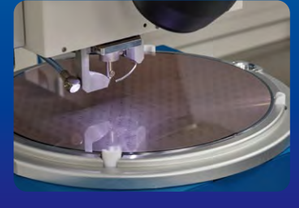
Advanced Automatic Wafer Testing Technology

VPM patent and advanced dynamic sensor and cartridge.

Advanced Automatic Wafer Handler

I_SEE intelligent image recognition system, which can provide intelligent recognition & positioning and high precision failure analysis.

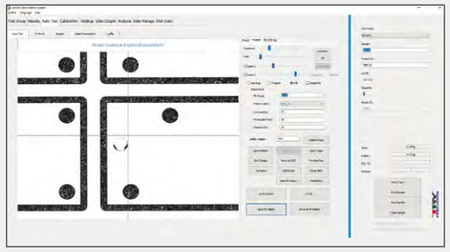
High precision XY stage , which has submicron resolution and high repeatability.



First-class Automatic Welding Strength Testing System

Automatic Software

ABT2000W INTEGRA test software has great configurability, visualized interface and various advanced functions. The I_SEE intelligent image recognition system can accurately match the wafer deflection and position deviation. Its high precision optics and cameras are used to recognize and analyze the failure mode, and the test results are automatically summarized and analyzed.



ABT2000W INTEGRA test software provides the ultimate flexibility for creating wafer maps, which allows to set up the test modes quickly and accurately, supports the file importing of industrial standard format Wafer Map, precise programming of semi-automatic operation positioning, programming of image interface and other methods. The program also supports the compatible usage of different machines and can be operated by the standard SECS/GEM control system.

Unique Digital Test Module

The unique industry-leading VPM patent and intelligent digital closed-loop control technology greatly enhance the test accuracy and repeatability accuracy of the system.
It can ensure that all thrust test modules are positioned accurately without any excursion. With fast and accurate automatic setting of shear height to micron level, the test action is smooth and accurate. Which also owns the characteristics of light contact force, positioning without horizontal excursion and precise shear height, etc.
The function of exchanging test modules between different equipment without loss of precision is truly realized for the first time in the industry.

Highlights

1.VPM vertical positioning patent;
2.Patented air bearing technology for shear force testing;
3.DGFT intelligent digital closed-loop technology;
4.24Bit ultra high resolution;
5.Auto Range

Powerful Optical System

ABT2000W system provides a range of optical solutions.

Intelligent Image Positioning System

It adopts high-resolution optical lens, CCD and intelligent AI algorithm to accurately recognize and locate the wafer angle and position deviation.

Intelligent Image Analysis System

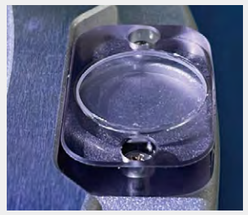
It can intelligently collect and analyze the image information to provide high-performance failure mode analysis and realize intelligent failure classification. Which greatly improves the wafer detection efficiency.

Trinocular Camera

Trinocular microscope equipped with high-definition camera can realize the automatic recording and picture capture in the process of the test. The high-definition binocular accuracy can assist the operator to program and position, or switch to semi-automatic test mode.

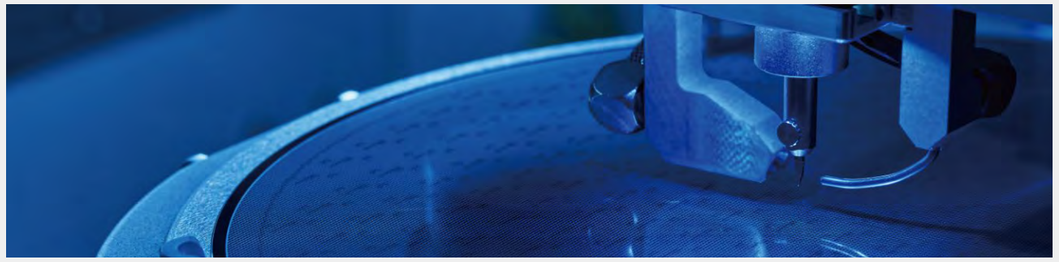
Automatic Tool Calibrator

It can realize the automatic and accurate positioning of testing tools, eliminate the positioning deviations caused by the replacing of tool or test module through 2 sets of precise optical imaging system.



Automatic Residue Removal

It is put into the test module, supporting program editing, so as to achieve rapid and efficient removal of residual during testing.



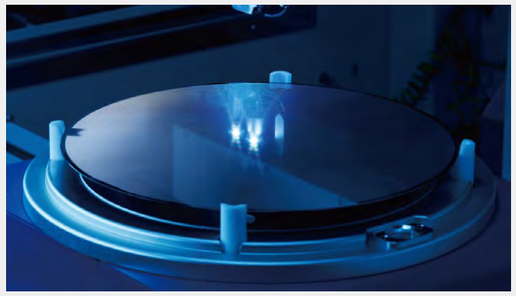
Satisfy the Warpage Wafer & Slice Wafer Test Requirements

The intelligent edge lift tray is with unique design, its supporting leg of edge lifting can avoid the curve wafer and slice wafer slipping off the tray. The gradual vacuum pressure shall form the optimum vacuum on the wafer.

The features of equipment include:

Pre-alignment of Accuracy

Eliminate the lateral movement by fully supporting the wafer at the edges.



Target Alignment of Cross-line Camera

The target alignment can assist the operator to determine the coordinate positions of the test tool in the automatic system. The accuracy of the position is greatly improved.

Inside Sensor

The inside sensor can accurately sense the wafer and vacuum pressure value, and ensure the firm adsorption of wafer.

Intelligent & Visualized Wafer Tray Controller

The multi-functional and programmable controller ensures safe and reliable transmission of wafer. Combining with vacuum sensing device and wafer induction device, the wafer can be accurately adsorbed to prevent any damages.
What's more, the operator can easily see continuous feedback of vacuum and air pressure, so as to take proper measures to prevent damage to the wafer in the event of a break in the compressed air supply.

Imaging & Classification of Failure Mode

Intelligent image acquisition, analysis and positioning, optimization of image quality, automatic classification of failure mode.

Automatic Wafer Testing Technology

Integrated Equipment Front End Module (EFEM)

ABT2000W INTEGRA is integrated with EFEM to ensure the reliability and repeatability of operation. The whole-process automation of wafer test (from wafer loading & unloading to test, to data and image analysis) can be realized through the ABT20000W INTEGRA with EFEM.
It is expandable and compatible with the function of OHT system, providing automatic Loadport, automatic open foup and other functions, and satisfying the development trend of modern semiconductor industry.
The highly visualized and configurable interface provides quick and easy automated test program development and execution for a variety of sample configurations.

ABT2000 INTEGRA

ABT2000 INTEGRA is a complete solution for automated wafer bond strength testing. The whole system allows the users to take cloud operation.

Test Without Operator Intervention

The system is fully controlled by the ABT2000W system and can be programmed to perform all parts of the test automatically without operator intervention.

Overall SECS/GEM Integration

The system is directly connected to the network to allow full SECS/GEM operation. The testing, analysis and results can be fully automated once it is in conjunction with the FOUP Loadport loading system.

Compatibility of Clean Room

It can select fan filter device and install ion removal device to the front door for clean room operation.

Automatic Wafer Calibrator

Wafer calibrator ensures that the warpage wafers are automatically clamped onto vacuum suckers prior to testing.

Fan Filter

Fan filter and closed door can be installed, which can maintain the positive pressure inside the system and removes debris from the test area.

Security Option

Light curtain or interlocking door can be installed to protect the operator from the injuries in the test area. The system will suspend the current test if the light curtain or interlocking door is damaged or opened, and restart the test after eliminating the failure.

Camera Monitoring

An optional CCD camera can be installed inside the equipment to allow monitoring and recording the test process.

Light Curtain/Safety Door

Loadport

Robot & Aligner

Test Module

VPM&DGFT&24Bit

Shear Test- Ball/Die

Transducer	Auto Range			
S250G	250g	100g	50g	25g
S500G	500g	250g	120g	50g
S1KG	1000g	500g	200g	100g
S5KG	5000g	2500g	1000g	500g

Pull Test- Wire

Transducer	Auto Range			
WP25G	25g	10g	5g	2.5g
WP50G	50g	25g	10g	5g
WP100G	100g	50g	25g	10g
WP1000G	1000g	500g	250g	100g

System Accuracy ±0.1% FS

Specifications

Equipmen	Equipment size	Length 1000mm · Width 2500mm (including display) · Height 2000mm(excluding alarm tower)
	Equipment Weight	1500kg
	Power Supply	100/110V or 220/240V AC @ 10A 50/60Hz
	Compressed Air Supply	Clean Dry Air Minimum 4 bar, 6mm OD / 4mm ID plastic pipe
	Vacuum Supply	Minimum 60kPa, 6mm OD / 4mm ID plastic pipe
	System Software Platform	Windows 10
Axis Specification	X/Y axis travel	340*275mm(standard)
	X/Y axis accuracy	±5 um Full Travel
	X/Y axis maximum speed	50mm/s
	X/Y axis maximum force	10kg(standard)
	Z axis travel	75mm
	Z axis accuracy over 2mm	± 1 um
	Z axis maximum speed	15mm/s
	Z axis maximum force	10kg
Stroke of XY Platform	340*275mm(standard)	Maximum Force:10Kg(standard)
	300*235mm	Maximum Force:10Kg(standard)
	550*415mm	Maximum Force:5Kg(standard)

Test Mode	Semi-automatic
	Automatic
	Host Control via SECS/GEM
	Wafer map download
Software	ABT2000W
	SECS/GEM (Please consult factory)
Wafer Loading	Manual
	Automatic (EFEM)
Compliance	European Directives
	Machinery Directive (2006/42/EC)
	Low Voltage Directive (2006/95/EC)
	EMC Compatibility (2004/108/EC)
	RoHS (2002/95/EC)
	CE Declaration of Conformity
	SEMI (S2)

As the industry leader in the field of push-pull force test, TRY-PRECISION supplies automatic, semi-automatic multi-function push-pull force tester and material tester with advanced technology and superior performance in long-term for semiconductor integrated circuit and microelectronics assembly industry. Owning a number of advanced core technologies, perfect market and service system. TRY-PRECISION also can provide deep technical support and efficient after-sales service so as to offer both high-quality products and services for global semi-conductor enterprises.

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