

Cascade

PA300

300 mm Semi-automatic Probe System

000111100010

> Overview

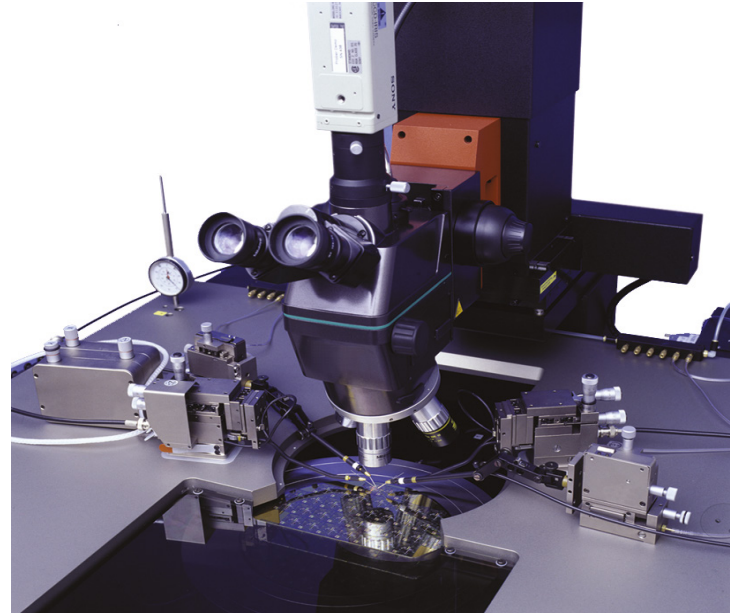
The PA300 is a precise and flexible semi-automatic test solution for wafers and substrates up to 300 mm. It is ideal for failure analysis (FA), device characterization and modeling from DC to 500 GHz.

The PA300 utilizes precisely machined components to ensure the highest accuracy and stability. The ground slides and ball-screw drives in closed-loop positioning with glass scales produce excellent performance. Based on your application requirements, you can choose between vacuum, magnetic, or dedicated high-frequency probe platens.

In order to provide maximum flexibility, our modular design concept allows us to mount microscopes based on your needs. This gives you the freedom to upgrade your PA300 from a simple manual microscope stage to a fully programmable microscope with high magnification.

The PA300 is controlled by our unique ProberBench™ operating environment which consists of an independent electronics rack, a joystick controller with integrated color LCD display for full prober control with or without a PC, and a truly flexible PC-based graphical user interface (GUI).

A wide range of accessories and upgrade options are available to optimize test productivity and ease-of-use.



> Features / Benefits

Precision	<ul style="list-style-type: none">• High Z-axis resolution• Stable, Linux-based controller with optional TTL or GPIB interfaces• Manual or motorized holder for backside measurement equipment
Flexibility	<ul style="list-style-type: none">• Variety of wafer carriers, glass chucks, mechanical edge clamping solutions• Wafer-handling robot can be docked onto prober• Easy to integrate with ProberBench operating environment• VisionModule™ available for automated testing processes• Interfaces to all major analysis instrumentation, optics software, and testers• RF tests supported by a wide range of probes and calibration tools, such as calibration substrates and WinCal XE™ calibration software
Ease of use	<ul style="list-style-type: none">• Low cost-of-ownership, fast return on investment• Upgradable for your future requirements

> Specifications

Chuck Stage

Travel range in X and Y	300 mm x 300 mm
Resolution	0.5 μm
Repeatability	$\pm 1 \mu\text{m}$
Accuracy	$\pm 2 \mu\text{m}$
Planarity	$\pm 15 \mu\text{m}$
Maximum speed	50 mm / sec

Z Movement

Travel range	10 mm
Resolution	0.25 μm
Repeatability	$\pm 1 \mu\text{m}$
Theta Movement	
Travel	$\pm 5^\circ$
Resolution	0.0001°

Programmable Microscope Movement (Recommended)

Travel range	50 mm x 50 mm
Resolution	0.25 μm
Repeatability	$\pm 1.0 \mu\text{m}$
Accuracy	$\pm 2.5 \mu\text{m}$
Access lift	130 mm

Manual Platen Movement

Drive type	Handwheel
Contact / separation stroke	0.4 mm
Travel	35 mm

Remote Interfaces

PC	RS232, IEEE488, LAN, TTL, GPIB
Electronics	IEEE488, TTL, GPIB

Utilities

Power	115 / 230 V, 50 / 60 Hz, 600 W (maximum 1500 VA)
Vacuum	Less than 200 mbar abs.
Compressed air	6 to 10 bar

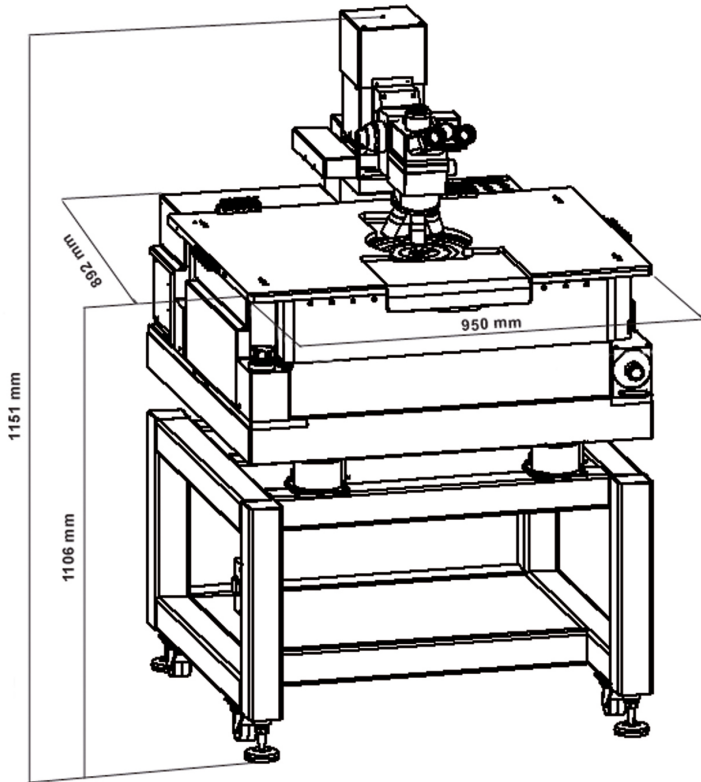
*Data, design and specification depend on individual process conditions and can vary according to equipment configurations.
Not all specifications may be valid simultaneously.

Physical Dimensions

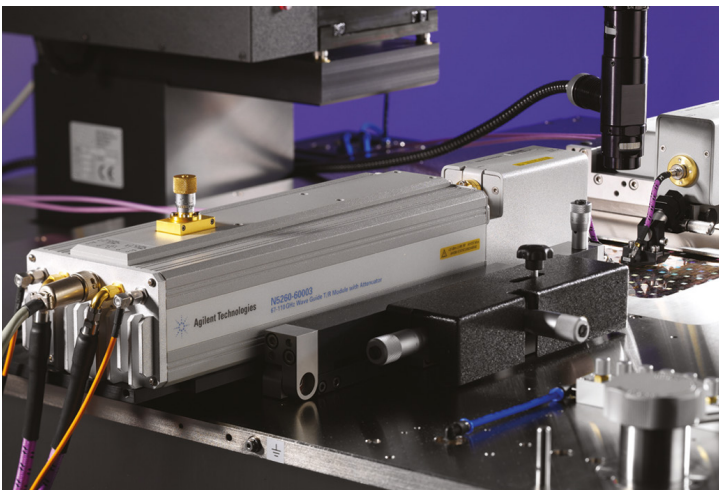
Weight

825 kg

Dimensions



Applications



Broadband 110 GHz setup for mm-wave IC measurements.



RF tests with IZI Probe® on PA300.

➤ Warranty

Warranty* Fifteen months from date of delivery or twelve months from date of installation

Service contracts Single- and multi-year programs available to suit your needs

* See FormFactor's Terms and Conditions of Sale for more details.

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