

A8a Flying Probe Test System Dual Shuttle

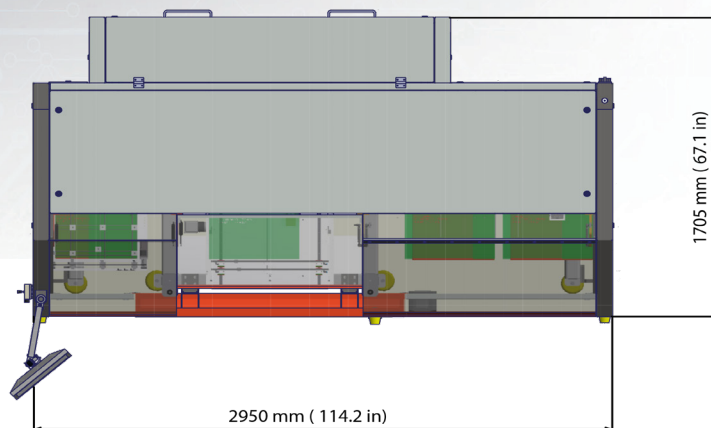
Automated Test for Rigid and Flexible Boards



- ▲ 8 Test Heads
- ▲ Fully Automatic “Lights-out” operation
- ▲ Dual-Shuttle System for highest throughput
- ▲ Tension Option for thin core and flexible panels
- ▲ Fast 300 mA Kelvin Testing

A8a Technical Specifications Dual Shuttle

Flying Probe Test System



Plan View

Mechanics

Fully automated test system for medium batch sizes in lights-out operation.
Basic unit with 8 test probes (4 top, 4 bottom)

Board Handling

Max. board size (X x Y)	480 mm x 330 mm / 18.9" x 13.0"
Min. board size (X x Y)	50 mm x 40 mm / 2.0" x 1.6"
Test area (X x Y)	480 mm x 310 mm / 18.9" x 12.2"
Board thickness	up to 5 mm, max. 2 kg
Product exchange time	0 s with dual shuttle mode, for test area max. 300 mm x 310 mm < 15 s with single shuttle mode
Loader capacity	390 mm 240 boards / 1.6 mm thickness
Smallest pad	35 μm / 1.4 mil* (special setup)
Smallest pitch	80 μm / 3.2 mil
Resolution measurement system	$\pm 0.1 \mu\text{m}$ / $\pm 0.004 \text{ mil}$
Repeatable accuracy	$\pm 4 \mu\text{m}$ / $\pm 0.16 \text{ mil}$
Soft touch probes	5 g to 10 g
*Micro needle probes	0.3 g to 2.5 g

Electronics

Continuity test	1 Ω to 10 k Ω (2-wire)
Isolation test	up to 25 M Ω (FM), up to 100 G Ω (ohmic) MicroShort Detection [®]
Test voltage	100 mV to 1000 V

Camera System

4 color cameras for fast optical scanning of top and bottom side.
Resolution 9 μm / pixel

Options

- 4-wire measurement with max. 300 mA test current
0 Ω to 1 k Ω $\pm 2\%$, min. $\pm 25 \mu\Omega$
with Kelvin probes 0.3 g to 2.5 g
Smallest pad 60 μm / 2.4 mil*
Smallest pitch 100 μm / 4.0 mil*
* special setup
- Embedded components test
R 0 Ω to 1 M Ω $\pm 1\%$, min. $\pm 0.5 \Omega$
1 M Ω to 200 M Ω $\pm 3\%$
C 0 F to 100 μF $\pm 2\%$, min. $\pm 30 \text{ fF}$
L 0 H to 10 mH $\pm 5\%$, min. $\pm 0.25 \mu\text{H}$

Diode / Varistor

U_{FV} , U_{R1} , U_{BR1} 0 V to 12.5 V
Structural test of integrated circuits:
opens/shorts test on CMOS devices with ESD diodes



Multi-Point Measurements

Up to three AC/DC sources (voltage and current) simultaneously.
Transistors (MOSFET and Bipolar), Optocouplers, Fuses,
Relays, Transformers, etc.
 $I_{\text{max}} = 300 \text{ mA}$



- LaTest[®] open detection
- Layup table for optimized product exchange time in single shuttle mode
- Label printer with barcode support
- Pen marker
- Retest of fault files from external grid test systems on inquiry
- Repair software with barcode support
- Tensioning modules for flexible board thickness 0,05 mm to 1.0 mm

Data input format	IPC-D-356A
Network connection	Ethernet, TCP / IP
Power supply	3 x 400 V, 50 Hz (3 x 208 V, 60 Hz), 1500 VA
Compressed air	8 bar / 115 psi, filtered
Temperature	18 $^{\circ}\text{C}$ to 27 $^{\circ}\text{C}$
Relative humidity	40% to 60%
Machine weight	1900 kg