

A7a Flying Probe Test System

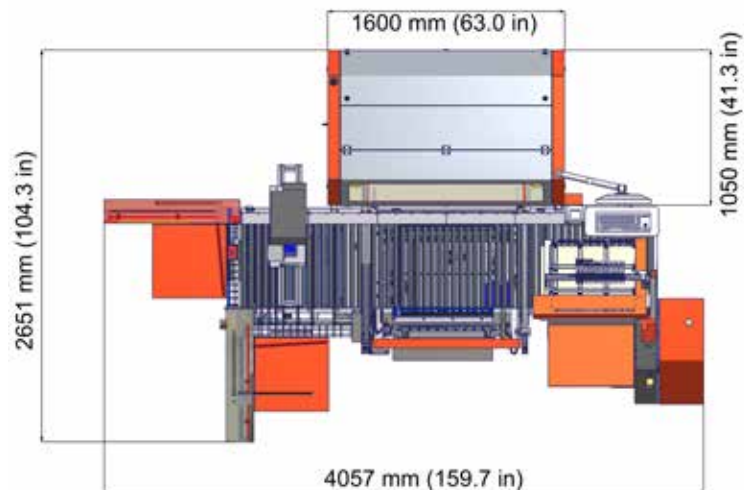
Automated Test for Rigid and Flexible Boards



- ▲ 8 Test Heads
- ▲ Fully Automated
- ▲ Soft touch probe
- ▲ Kelvin 4-Wire Testing

A7a Technical Specifications

Flying Probe Test System



Plan View

Mechanics

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

Board Handling

	Manual mode	Automatic mode
Max. board size (X x Y)	635 mm x 535 mm	635 mm x 535 mm
Min. board size (X x Y)	25 mm x 25 mm	100 mm x 100 mm
Test area (X x Y)	610 mm x 510 mm	610 mm x 510 mm
Board thickness	up to 7 mm	up to 5 mm
Loader capacity	390 mm	
	240 boards / 1.6 mm thickness	
Cycle time automation	< 20 s (clamping mode)	< 24 s (tensioning mode)

Smallest pad	50 μm / 2.0 mil
Smallest pitch	100 μm / 4.0 mil
Resolution measurement system	$\pm 1 \mu\text{m}$ / ± 0.08 mil
Repeatable accuracy	$\pm 5 \mu\text{m}$ / ± 0.2 mil
Soft touch probes	5 g to 15 g

Electronics

Continuity test	1 Ω to 10 k Ω
Isolation test	up to 25 M Ω (FM), up to 10 G Ω (ohmic) MicroShort Detection [®]
Test voltage	up to 500 V

Camera System

4 color cameras (1024 px x 768 px) for fast optical scanning of top and bottom side

Options

- 4-wire measurement with max. 300 mA test current
0.25 m Ω to 1 k Ω $\pm 2\%$, min. ± 0.025 m Ω
with Kelvin probes 0.2 g to 5 g
Smallest pad 80 μm / 3.2 mil*
Smallest pitch 120 μm / 4.8 mil*
*with Kelvin probe fine adjustment
- Embedded components test
R 0.5 Ω to 10 M Ω $\pm 0.5\%$, min. $\pm 0.5 \Omega$
> 10 M Ω to 50 M Ω $\pm 2\%$
C 0.1 pF to 100 μF $\pm 2\%$, min. ± 0.03 pF
L 0.2 μH to 5 mH $\pm 3\%$, min. $\pm 0.1 \mu\text{H}$
Diode / Varistor
 U_R reverse voltage and
 U_{BR} breakdown voltage up to 10 V
- LaTest[®] open detection
with LaTest[®] probes 1 g to 10 g
High current 1.4 A (1 kHz)
- Label printer with barcode support
- Retest of fault files from external grid test systems on inquiry
- Repair software with barcode support
- Tensioning modules for flexible boards

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), 2500 VA
Compressed air	6 bar / 90 psi, filtered
Temperature	18 $^{\circ}\text{C}$ to 27 $^{\circ}\text{C}$ / 66 $^{\circ}\text{F}$ to 81 $^{\circ}\text{F}$, ± 3 K
Relative humidity	40% to 60%
Machine weight	1550 kg / 3175 lbs

All information subject to change without notice!
March 2013

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