



Automatic Testing Equipment



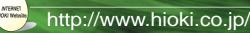
# Merging of the Flying Probe and Fixture



## Max. 100 times/sec High-speed Inspection



Model 1118 INTEGRATED HITESTER offers high speed inspection that is ideal for IC package components such as FC-PGA, FC-BGA and MCM substrates. The high-precision fine-pitch probing is made up of two flying probes from the top side, which operates together with the lower test head/fixture to provide super speed inspection while maintaining low running costs. In addition to the short/open inspection feature and insulation testing for up to 250VDC, a 4-terminal resistance measurement function is also standardly equipped, demonstrating that the unit is powerful for also testing of low resistance of IVH (Interstitial Via Hole).



HIOKI company overview, new products, environmental considerations and other information are available on our website

#### Specifications

#### [ Measuring unit ]

Data types : Step data

S/O data (Net data)

Number of channels: Test heads: Standard 512 channels

(maximum 8,192 channels)

Flying unit: 2-channel External electrode: 4-channel

Continuity test : 400 m $\Omega$  ~: Detecting short

 $100 \,\mu\Omega$  ~ : Measuring resistance Insulation test

: ~500 MΩ/250 V ~200 MΩ/100 V

(variable in steps of 1 V)

DC measurement

:  $400 \,\mu\Omega$  to  $40 \,\mathrm{M}\Omega$ Resistance Capacitance :  $4 \mu F$  to 400 mFAC measurement (flying probe unit) Resistance :  $100~\Omega$  to  $100~M\Omega$ : 10 fF to 10  $\mu$ F Capacitance :  $10 \,\mu\text{H}$  to  $100 \,\text{H}$ Inductance

#### ■ Test types

Test item	
Continuity test	
Step test	
Insulation test 1*	
Insulation test 2*	
Step test	
Step test	

<sup>\*:</sup> Test conditions for the insulation test 1 and 2 can be set separately.

#### ■ Testable Boards

Board size : 1118-01; 10×10-70×250 mm

1118-11; 10×10-250×330 mm

**Board thickness** : 0.3-3.2 mm

#### [ Mechanism part ]

#### ■ Flying Probe Unit

Number of arms : Two arms (L. R) Work area : 70×70 mm Range of XY movement: 320×100 mm Minimum pad diameter :  $20 \, \mu \mathrm{m}$ Minimum pitch of : 0.1 mm

(between the left and right arms when using a probes

link-type probe)

#### ■ Test Head Elevating Unit

Maximum installed test heads: 2 (1118-01), 1 (1118-11) Horizontal probing precision : Within  $\pm 100~\mu m$ Horizontai repeatability precision : Within  $\pm 20 \mu m$ 

#### ■ Test Heads

Probing area : 10×10-70×70mm Maximum number of probes: 4096

Minimum pitch : 4-terminal measurement probes: 1.0 mm

Fine pitch probes: 0.2 mm

#### ■ Transport Unit

Number of board transport shuttles: 2 (1118-01), 1 (1118-11)

XY repeatability precision : Within  $\pm 5 \mu m$ 

■ Positioning Correction : Automatic positioning correction

#### [ General specifications ] -

Power supply voltage : 200/220/230/240VAC single-phase (50/60 Hz)

Specify at time of shipment

Consumption power : 3kVA

Operating temperature  $\,:23^{\circ}C\,\pm10^{\circ}C$  , 70%rh max.(with no condensation)

and humidity range

Storage temperature : 10 °C to 43 °C, 80% rh max.

(with no condensation): Main unit and humidity range

23 °C ±10 °C, 70% rh max. (with no condensation): Test heads Location for use

: Room: Do not operate in a dusty environment,

an area subject to vibration, an atmosphere

containing corrosive gas, or the like Floor strength: At least 500 kg/m<sup>2</sup>

Applied air : 0.5 to 0.99 Mpa (dry air) Air consumption : Up to 0.3 Nl/min

**Dimensions** 

: Approx. 1630 (W) × 1600 (H) × 1810 (D) mm

(excluding protruding parts)

Mass : Approx. 1500 kg

#### 1118-01 X-Y INTEGRATED HITESTER (double shuttle) 1118-11 X-Y INTEGRATED HITESTER (single shuttle)

#### **Factory Options**

	1118-01		1118-11
	for R SHUTTLE	for L SHUTTLE	
VACUUM UNIT	1948-03	1948-04	1948-05
BOTTOM SIDE ALIGNMENT CAMERA	1940-43	1940-44	1940-45
BOTTOM SIDE ROTATION ALIGNMENT UNIT	1948-13	1948-14	1948-17
STAMP UNIT	1941-41	1941-42	1941-43
STAMP UNIT WITH THE CAP	1941-45	1941-46	1941-47
COAXIAL DOWNWARD ILLUMINATION UNIT	1945-33	1945-34	1945-35
ION BLOW UNIT	1910-03		1910-04

	1118-01/1118-11		
	for R ARM	for L ARM	
COAXIAL DOWNWARD ILLUMINATION UNIT	1945-31	1945-32	
1.2 POWER LENS UNIT	1947-31	1947-32	

1138-01 SCANNER BOARD (256ch units) 1139-04 1118 DATA COMPOSITION SOFTWARE 1139-54 FL-LINK5 FLY-LINE LINK SOFTWARE 1152-02 512 SCCANER CABLE

1165-04 TEST HEAD

1166-03 BOARD FIXING UNIT

1330-04 MEASUREMENT UNIT CALIBRATION UNIT

1355-01 VACUUM PUMP 1356 MAINTENANCE TOOL SET

1911-01 SCANNER EXTENSION UNIT 1944-01 EXTENSION I/O BOARD

1946-05 MONITOR CAMERA

### **Options**

1134-02 IMPRESSION SHEET (1 box supplied as standard accessory)

1196 PRINTER PAPER

1350-04 OFFSET BOARD

(2 boards supplied as standard accessories)

1172-66 LINK PROBE

1172-67 DOUBLE LINK PROBE

1172-68 LINK PROBE WITH BLADE

1172-69 DOUBLE LINK PROBE WITH BLADE

1172-74 PROBE FOR CALIBRATION

1172-80 PROBE (3 mm stroke)

1172-81 LINK PROBE (high-speed version)

1172-83 DOUBLE LINK PROBE



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