

# HIOKI



## 1118 X-Y INTEGRATED HiTESTER

Automatic Testing  
Equipment



***Merging of the  
Flying Probe and Fixture***



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



ISO14001  
JQA-E-90091



<http://www.hioki.co.jp/>

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

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).

## ■ Specifications

### [ Measuring unit ]

Data types	: Step data S/O data (Net data)
Number of channels	: Test heads: Standard 512 channels (maximum 4,096 channels) Flying unit: 2-channel External electrode: 4-channel
Continuity test	: 400mΩ~: Detecting short 100μΩ~: Measuring resistance
Insulation test	: ~500MΩ/250V ~200MΩ/100V (variable in steps of 1 V)
DC measurement	
Resistance	: 400μΩ to 40MΩ
Capacitance	: 4μF to 400mF
AC measurement (flying probe unit only)	
Resistance	: 100Ω to 100MΩ
Capacitance	: 10fF to 10μF
Inductance	: 10μH to 100H

### [ Mechanism part ]

#### ■ Flying Probe Unit

Number of arms	: Two arms (L, R)
Work area	: 70×70 mm
Range of XY movement	: 300×100 mm
Probing accuracy	: Within ±50μm (each arm X-Y directions) (20°C±3°C)
Repeatability of movement	: Within ±20μm (probing position) (at the same temperature)
Minimum pitch of probes	: 0.1mm (between the left and right arms when using a link-type probe)

■ Positioning Correction : Automatic positioning correction

### [ General specifications ]

Power supply voltage	: 200/220 VAC single-phase (50/60 Hz) : Specify at time of shipment
Consumption power	: 3kVA
Operating temperature and humidity range	: 23°C±10°C 70%rh max.(with no condensation)
Storage temperature and humidity range	: 10°C to 43°C 80%rh max. (with no condensation) : Main unit 23°C±10°C 70%rh max. (with no condensation) : Test heads

#### ■ Test types

Test type	Test item
Tests for conductivity	Continuity test
	Step test
	Rubber test*
Tests for insulation	Insulation test 1**
	Insulation test 2**
Tests for Component	Step test

\* :With an optional conductive rubber unit.

\*\* :Tset conditions for the insulation test 1 and 2 can be set separately.

#### ■ Testable Boards

Board size	: 10×10–70×250mm
Board thickness	: 0.3–3.2mm

#### ■ Test Heads

Probing area	: 10×10–70×70mm
Maximum number of probes:	1024
Minimum pitch	: 4-terminal measurement probes: 1.0 mm Fine pitch probes: 0.2 mm

#### ■ Test Head Elevating Unit

Maximum installed test heads:	2 (A, B) with a double shuttle system
Probing accuracy	: Within ±100μm
Repeatability	: Within ±20μm

#### ■ Transport Unit

Number of board transport shuttles:	2 (A, B): Double shuttle
Repeatability	: Within ±5μm

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. 1260 (W) × 1750 (H) × 1245 (D) mm (excluding protruding parts)
Mass	: Approx. 1000 kg

## 1118 X-Y INTEGRATED HiTESTER

### ■ Factory Options

1165-04	TEST HEAD
1138-01	SCANNER BOARD
1139-04	1118 DATA COMPOSITION SOFTWARE
1330-04	MEASUREMENT UNIT CALIBRATION UNIT
1355-01	VACUUM PUMP
1356	MAINTENANCE TOOL SET
1941-31	STAMP UNIT for R ARM
1941-32	STAMP UNIT for L ARM
1944-01	EXTENSION I/O BOARD
1946-04	MONITOR CAMERA
1947-21	1.2 POWER LENS UNIT for R ARM
1947-22	1.2 POWER LENS UNIT for L ARM
1948-11	CONDUCTIVE RUBBER UNIT
1139-53	FL-LINK5 FLY-LINE LINK SOFTWARE

### ■ Options

1134-02	IMPRESSION SHEET (1 box supplied as standard accessory)	1172-71	SHOCK-ABSORBING SINGLE NEEDLE PROBE (WC)*
1164-02	ONE-WAY CLUTCH (Used for installation and removal of shock-absorbing probes)	1172-72	SHOCK-ABSORBING TRIANGULAR PYRAMID PROBE (SK)*
1164-03	PROBE ATTACHMENT (Used during installation of shock-absorbing probes)	1172-74	PROBE FOR CALIBRATION
1196	PRINTER PAPER	1172-75	SHOCK-ABSORBING SINGLE NEEDLE PROBE (HP)*
1350-03	OFFSET BOARD (2 boards supplied as standard accessories)	1172-76	SHOCK-ABSORBING SINGLE NEEDLE PROBE (HP SR10)*
1172-66	LINK PROBE	1172-77	SHOCK-ABSORBING SINGLE NEEDLE PROBE (WC SR10)*
1172-67	DOUBLE LINK PROBE	1172-80	PROBE (Flat spring, 3 mm stroke)
1172-68	LINK PROBE WITH BLADE	1172-81	LINK PROBE (Link, high-speed version)
1172-69	DOUBLE LINK PROBE WITH BLADE	1172-83	DOUBLELINK PROBE (Double link, 35 μm between terminals)
1172-70	SHOCK-ABSORBING SINGLE NEEDLE PROBE (SK)*		

\* : The 1164-03 PROBE ATTACHMENT is necessary.

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