

HIOKI



1107-60,61 UNIT HiTESTER

Automatic Testing
Equipment



Guaranteeing $\mu\Omega$

A standard four-terminal measurement function

The 1107-60,61 UNIT HiTESTER is a bare board tester employing a test head (inspection jig) that is suitable for batch inspection and inspection of mass-produced fine-pitch boards. Integration of the handler and the inspection unit allows test boards to be supplied, aligned, inspected, evaluated, and forwarded in an uninterrupted sequence, and increases speed.

The schematic diagram illustrates the testing process. It starts with 'PCB Supply' leading to 'Alignment (Both Sides)'. The process then moves to 'Inspection' and 'Index Table'. From the 'Index Table', the process branches into 'Pass' and 'Fail'. The 'Fail' branch further divides into 'Open' and 'Short'.



ISO14001
JQA-E-90091



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

■ Specifications

[Mechanism part]

■ XY axis unit (Applies to both top and bottom sides)

Test board	: 1107-60 : 10 × 10 mm to 75 × 75 mm 1107-61 : 10 × 10 mm to 70 × 250mm
dimensions	
Board thickness	: 0.3 to 3.2 mm (not possible in all cases. Please consult us regarding particularly thin or thick boards)
Travel resolution	: 1.25 μm
Position repetition	: Within ±10 μm

■ Theta axis unit (Applies to both top and bottom sides)

Position repetition	: Within ±3 sec.
Rotation range	: ±3° (during measurement)

■ Z axis unit (Applies to both top and bottom sides)

Travel stroke	: Upper:3 mm, Lower:5mm (automatic inspection mode)
Position repetition	: ±10 μm

[Measuring unit]

No. of test points	: Standard 1024 pins (expandable up to 4096 pins) Max. 8192 pins (optional)
No. of test steps	: Component test data max. 100000 steps (only data equivalent to 1 piece is held as test data)
Insulation test	: FAIL when LEAK Test voltage: DC 1 V to 250 V Resolution can be set in 1 V units Measurement range: 10 V; 2 kΩ to 20 MΩ 50 V; 10 kΩ to 100 MΩ at least 100 V; 50 kΩ to 200 MΩ
Continuity test	: FAIL when OPEN Test current: DC 10 mA to 150 mA (5 ranges) Measurement range: 0.4 Ω to 1 kΩ (The measurement range varies with the range.)
Measurement time	: 0.4 sec/1024 points (1 pattern/2 points, conforming article measurement, insulation test; 200 V/ 20 MΩ, continuity test; 50 mA/ 100 Ω)

■ Index table unit

Loading height	: 900 mm ±10 mm
Position repetition	: ±3 sec.

■ Tact time

Condition	: Conductivity/insulation inspection of 1024 points at 2 points per pattern
Tact time	: 2.5 seconds per piece

■ Test head

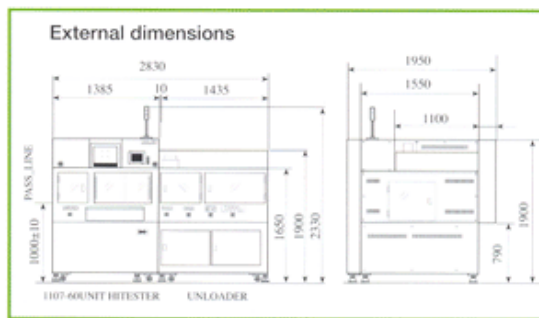
Probing area	: 10 × 10 mm to 80 × 80 mm
Max. number of pins	: Max. 4096 pins for each surface (Max. total for upper and lower surfaces: 8192 pins)
Probe interval pitch	: Min. 150 μm (Consultation is required for 110 μm)

Component test	: Insulation test Test voltage: DC 1 V to 250 V Resolution can be set in 1 V units Measurement range: 10 V; 2 kΩ to 20 MΩ 50 V; 10 kΩ to 100 MΩ at least 100 V; 50 kΩ to 200 MΩ
	: Continuity test : FAIL when OPEN : Test current: DC 10 mA to 150 mA (5 ranges) : Measurement range: 0.4 Ω to 1 kΩ : Resistance : 0.4 Ω to 40 MΩ : Low resistance (4-terminal measurement): 400 μΩ to 400 kΩ Insulation resistance: 200 Ω to 500 MΩ
	Capacitance: 10 pF to 400 mF Diodes, transistors: 0 V to 25 V Zener diodes : 0 V to 25 V

[General specifications]

Power supply	: AC 200 V ±10% (single phase) 50/60 Hz Power consumption: 4 kVA
Pneumatic system	: Primary pressure: 0.6 to 0.99 MPa (dry air) Setting pressure (secondary side): 0.5 ±0.1 MPa
Operating environment	: Operating temperature and humidity: 23°C ±3°C, 60% rh max. (no condensation) : Storage temperature and humidity: 10°C to 43°C, 80% rh max. (no condensation) (same as for using the test heads) : Atmosphere: Avoid use in an atmosphere where dust, vibrations or corrosive gases may occur. : Floor strength: 500 kg/m ² or higher
Insulation resistance	: 100 MΩ or higher (DC 500 V between power supply and cabinet)
Withstand voltage	: AC 2.2 kV RMS
Accessories	: PC accessories (such as a keyboard), 40-character width thermal printer, printer cable, printer buffer, leveling jacks, and maintenance tool set

Main unit dimensions: Approx. 2830 (W) × 1900 (H) × 1950 (D) mm (excluding protruding parts)
Mass : Approx. 2,400 kg



1107-60 UNIT HiTESTER (Unit testing)
1107-61 UNIT HiTESTER (Step&Repeat)
(1107-60,61 DOUBLE-SIDED ALIGNMENT)

● Options

1138-01 SCANNER BOARD (256-pin unit)
For both 2- and 4-terminal measurement (user-selectable)
Uses 2 channels per point for 4-terminal measurement

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