

. 使用说明书

. *User Manual*

.....
硅材料迷你测试仪

Si Material mini Tester
.....

型号(*Model*): *Minihi*

版本 (*Ver*) : *1.0*

杭州晶翔电子科技有限公司

Hangzhou Jinsun Electronic Technology Ltd

尊敬的用戶：

感謝您選用了硅材料迷你測試儀，使用本机前敬請仔細閱讀本使用說明書，以便能得到更好的測試效果。

Dear Sir or Madam:

Please read the User Manual before use the tester. To get English User Manual(.PDF), please visit our homepage www.sunsitec.com

1. Instruction

This tester using Four-probe principle is a integration test equipment. It can measure radial Res and axis Res of Silicon material. It is suitable to part solar Silicon.

2. Feature

- Powered by two AAA batteries of size 7.
- One head with five probes tests Silicon's P/N Type and Res at the same time. Display the both result as soon.

- High precision of Res..It can test 0.001 Ohm*cm。
- P/N Type test: It can accurately distinguish P/N Type of Silicon whose Res is from 0.005 Ohm*cm to 50 Ohm*cm.
- Super portable with its tiny volume.
- Very low power consumption brings long working time by two size 7 batteries. Easy operation, speedy testing.

3. parameter

- Power: two size 7 AAA batteries.
Power consumption in testing is below 0.3W
- Standby mode power consumption: 15mW
- Sleep mode power consumption 0.1mW
- Size of whole tester: 37mm × 124mm × 22mm
- Res Range: 0.001~50 Ohm*cm
- Error range: $\pm 10\%$ & $\pm 2\text{LSB}$

4. Operation

a. Fix the battery

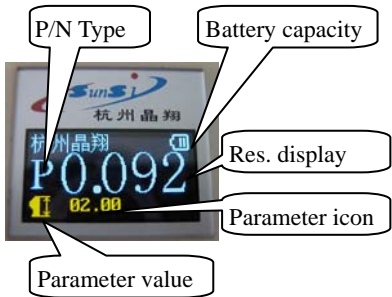
Open the battery cover at the background, put two size 7 batteries correctly (spring end to the cathode), **cover back the battery cover.**

b. Interface intro

Liquid Crystal Display is light after fixed the battery. It displays as follow:



Up line number is the leave factory date. Down line number is the edition number and the serial number. The number in the figure means it is the No. 001 tester leaves factory on 30th August 2008. The edition of the tester's software is Ver. 1.0. Seconds later it goes into testing interface. Display as follow:



1) parameter icon indicate

☐ wafer's thickness icon

Ⓚ calibrate icon

2) Parameter value display

It is the value of the parameter icon display.

The unit of the thickness is mm,
precision is 0.01mm.

Calibration range: 3000~6000

3) P/N Type display

Display the sample's P/N Type.

4) Res. Display

Display the sample's Res. value. The
unit of Res. is Ohm*cm.

Res. <0.1, precision is 0.001

0.1 < Res. <1, precision is 0.01

Res.>1 precision is 0.1

c. Button operation


There are 4 touch buttons in button

area. Function of button as follow:

- 1)  power button

Long press it, the tester will turn off.

Or press it to turn on the tester.


- 2)  plus button

To increases the parameter's value when press it in the set mode.

Long press, quickly increase.

- 3)  set button

To switch the parameter icons is as the same meaning to switch to set different parameter.

- 4)  minus button

Opposite to the plus button. To decrease the parameter's value.

d. Turn off the tester

Press the power button until it displays “谢谢使用”.

5. General

a. If there is no display in the screen when press the power button to turn on the tester, check the battery is fine.

b. After using a long time, when it shows bigger warp, please check the needlepoint of the probes are rubdown. In the five probes, one can be directly changed for a new one, however, the other four, should be changed for new only by changing a new fitting.

c. Any other problems in using this

equipment, please phone us. Thanks
for using our tester.

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迷你 HI

- 采用两节 7 号 AAA 电池供电。
- 同时检测硅半导体材料的电阻率和导电类型两项指标。
- 电阻率测试分辨率，最小可到 0.001 欧姆.厘米。
- P/N 导电类型测定:能精确的分辨电阻率在 0.005 欧姆.厘米到 50 欧姆.厘米之间的硅半导体材料导电类型。
- 微小的体积带来极强的便携性。
- 极低功耗带来超长使用时间。
- 简单的操作，快速的测试。

推荐工作条件

- 温度: $23 \pm 2^{\circ}\text{C}$
- 湿度: 60%~70%
- 无强光照、无强磁场、不与高频设备邻近

参数指标

- 供电电源: 两节 7 号 AAA 电池
- 使用时最大功率 $<0.3\text{W}$
- 待机状态功耗约 15mW
- 软关机状态功耗约 0.1mW
- 整机尺寸 $37 \times 124 \times 22\text{mm}$
- 测试范围 0.001~50 欧姆.厘米
- 测试精度 $\pm 10\%$ 或 $\pm 2\text{LSB}$

一、 Feature

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Working condition

- Temperature: $23 \pm 2^{\circ}\text{C}$
- Humidity: 60%~70%
- No strong illumination, no magnetic field, not near by high frequency facility

二、 parameter

- Power: two size 7 AAA batteries. Power consumption in testing is below 0.3W
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