

一、Structure Characteristics



fig.1-1 Test and control interface



fig.1-2 Testing Square resistance

二、summary

2.1 basic function

ST2263 double testing digital four-probe tester is a multi-purpose and intellectualized comprehensive measuring instrument for material resistivity/block resistance based on double position measurement with linear or square four probe - improved Van der Pauw Measurements

Double position measurement with linear or square four probe - improved Van der Pauw Measurements

2.2 Main national standards

GB/T 1551-2009 《Test Method for Measuring Resistivity of Monocrystal Silicon》、

GB/T 1551-1995 《Test method for resistivity of silicon and germanium bars using a two-point probe》、

2.3 Instrument composition

It is composed of the main engine, test bench and probe, Four probe test bench and ST2263 four probe test software.

2.4 Advantage characteristics

a.dual electro-testing configuration four-point probes

The highest level of accuracy in the four probe test mode

b.It is equipped with computer software.

You can save, query, count and analyze data and print reports.

c.Wide range

With 8-gear ultra wide range, leading in the industry. The instruments in the same industry are generally in five to six gears.

d Simple operation and stable performance

All parameter setting and function conversion adopt digital keyboard input, which is simple and can avoid the instability of analog positioner.

e. USB communication interface

Good versatility, convenient and fast. Better than RS232 or 485 mode.

2.5Adaptation scenario

The instrument is suitable for testing the conductivity of conductors, semiconductors and semiconductor like materials by four probe method in semiconductor material factories, device factories, scientific research institutions and colleges and universities. It is especially suitable for the test of micro region with inclined four probes

三、Technical parameter

3.1. Characteristic parameters of samples

Measuring range.resolution

Resistance: $10.0 \times 10^{-6} \sim 200.0 \times 10^3 \Omega$, resolution $1.0 \times 10^{-6} \sim 0.1 \times 10^3 \Omega$

$(1.0 \times 10^{-6} \sim 20.00 \times 10^3 \Omega, \text{ resolution } 0.1 \times 10^{-6} \sim 0.01 \times 10^3 \Omega)$

Resistivity: $10.0 \times 10^{-6} \sim 200.0 \times 10^3 \Omega\text{-cm}$ resolution $1.0 \times 10^{-6} \sim 0.1 \times 10^3 \Omega\text{-cm}$

$(1.0 \times 10^{-6} \sim 20.00 \times 10^3 \Omega\text{-cm} \text{ resolution } 0.1 \times 10^{-6} \sim 0.01 \times 10^3 \Omega\text{-cm})$

Square Resistance: $50.0 \times 10^{-6} \sim 1.0 \times 10^6 \Omega/\square$ resolution $5.0 \times 10^{-6} \sim 0.5 \times 10^3 \Omega/\square$

$(5.0 \times 10^{-6} \sim 100.0 \times 10^3 \Omega/\square \text{ resolution } 0.5 \times 10^{-6} \sim 0.1 \times 10^3 \Omega/\square)$

3.2. Material size

Diameter : Direct test on test bench SZT-C 180mm×180mm, .

Length (high): Direct test on test bench SZT-C $H \leq 100\text{mm}$,

Sample size and height are unlimited when measured by hand-held method.

3.3. Range Division and accuracy degree

Full scale	200.0	20.00	2.000	200.0	20.00	2.000	200.0	20.00
Unit	KΩ-cm			Ω-cm			mΩ-cm	
Basic Error	±2% Display value±4 byte	±1.5% Display value± 4 byte	±0.5% Display value ±2 byte				±0.5% Display value ±4 byte	

3.4 Four probes (select one or add all)

a. Tungsten carbide probe: $\Phi 0.5\text{mm}$, Linear probe spacing 1.0mm, Probe pressure: 0~2kg

b. Thin film square resistance probe: $\Phi 0.7\text{mm}$, probe spacing 2.0mm, Probe pressure: 0~0.6kg

3.5 Outline size

Instrument mainframe: 245mm (length) × 220 mm (width) × 95mm (height)

3.6 Instrument dimensions and power supply

Power Supply: Voltage=220V±10V, Frequency f=50Hz±5Hz. Power: $P < 20\text{W}$,

Size: width×height×length = 22cm×24.5cm×10cm Weight: $\leq 2.5\text{Kg}$