RHESCA

# 5200T

## New Generation of Solderability tester


**RHESCA launched 5200T in the overseas solderability-testing world.**
**The year 2010 may mark the start of a new era for the solderability testing.**
**5200T is defining latest high performance solderability tester.**

RHESCA CO., LTD. was established in 1955.
We have traceability experience of manufacturing testing instruments for electronic components for over 50 years in the word.
With previous good history of SAT-5100 and SAT-5000 models, RHESCA has now grown to become one of the leading companies in Japan for solderability testers.

**RHESCA CO., LTD.**

# Features of 5200T

5200T robust solderability platform is renowned for its superior build quality and exceptional performance.
5200T has been designed to integrate with the widest range of method for solderability testing.
Our development is in a bid to lessen the burden of the users, and they take a good repeatability. The unique design of the 5200T allows state-of-the-art performance without requiring study for solderability testing technique.

In conformity with international standard as follows,

- IEC 60068-2-54
- IEC 60068-2-69
- IPC/EIA J-STD-002B
- IPC/EIA J-STD-003B
- MIL STD 883
- JIS C 60068-2-69
- JIS C 60068-2-54
- JIS Z 3198-4
- JIS C 0099
- JEITA ET-7401
- JEITA ET-7404
- JEITA ET-7411
- User customs criterion

### New electro microbalance:

We board on a new improved electro microbalance and controller in a bid to lessen the burden of the users with improved auto zero balancing. If appropriate balance weight is required, auto prompt display will notify the users. This new electro microbalance has better response for wetting force and able to perform good repeatability for the result. We achieved success high resolution that the dynamic wetting force and time are established down to 0.01mN resolution.

### Stand-alone and PC-based data manipulation:

We board on touch panel display for stand-alone full operation, which can show the result of wetting force and time chart.

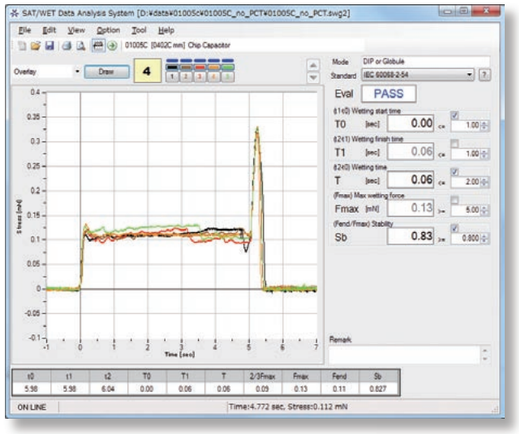
### Magnetic clip hold:

We have improved sample clips using magnetic hold for good repeatability by samples position.

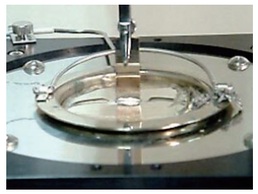
# Software

The SAT/WET DATA ANALYSIS SYSTEM is the control and data manipulate software for RHESCA s' solderability-testing systems. The SAT/WET DATA ANALYSIS SYSTEM allows simple operation via PC. Users can have selection of languages between English, Chinese or Japanese.

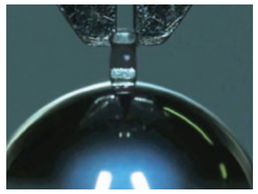
- The test mode select
- Make the test file and data save including condition
- Transfer the instruments' condition and start/stop function from the PC
- Take the data and shows wetting force to time chart, which can overlay, zoom and average
- Automatic passes or fails judgment
- Report print out



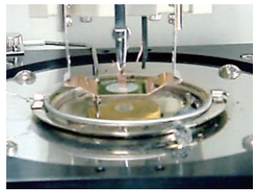

# Application



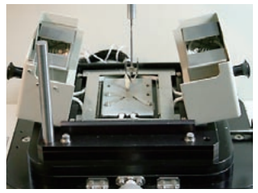
Wetting Balance Method



Solder Globule Method



Rapid Heat Method



Temperature Profile Method

## We have 4 plus 1 method.

RHESCA has a broad range of analysis method suitable for our solderability-testing systems.

### 1 Wetting Balance Method

This is conventional method for testing solderability between molten solder and specimen. The wetting balance method, primarily aimed at inspecting solderability of flow soldering, has been used over 25 years.

### 2 Solder Globule Method

In this method, a solder globule is used to cope with the difficulty involved in the wetting evaluation between molten solder and surface mount devices. We can support O.D. 4, 2 and 1mm Aluminum globule blocks.

### 3 Rapid Heat Method

This method serves fast evaluation of solderability between surface mount device and solder paste. At first a surface mount device is brought into contact with a customized copper coupon that printed with solder paste. They are then placed on molten solder, rapid heated and the wetting curve determined.

### 4 Temperature Profile Method

At first, a surface mount device is brought into contact with a customized copper coupon that printed with solder paste. Then you can take the wetting force with temperature profile/gradient by upper and lower heaters. You can make a temperature profile flexible, which is similar to a reflow-soldering furnace. This method helps to study condition for reflow soldering lines and to study the flux effect. Nitrogen gas purge is available.

### Reflow simulate Mode

This mode is simulating for reflow soldering and study for flux activity. At first, a surface mount device or solder ball and printed copper coupon set into appropriate position and going temperature profile. Both sample and printed solder paste are heating by upper and lower heater. After reflow temperature profiling which sample put into solder paste and get the wetting force and time, temperature chart.

## Configuration

| | |
|---|---|
| **5200T with PC** | PC with monitor, Data manipulate software, USB cable<br>Kit (Clip A, B, C, 45 degree, 2 solder pod)<br>Certification of calibration |
| **5200T** | Data manipulate software, USB cable<br>Kit (Clip A, B, C, 45 degree, 2 solder pod)<br>Certification of calibration |


Clip A


Clip B


Clip C


Clip 45 degree

## Specification

| | |
|---|---|
| **Solder temperature** | RT. to 400 degree |
| **Size of solder pod** | I.D. 60mm, 30mm depth |
| **Range of analysis** | 10mN full scale and 50mN full scale |
| **Dwell time** | 1 to 999sec, 1 to 999min |
| **Immersion depth** | 0.01 to 1mm 0.01mm steps |
| | 1 to 20mm 0.1mm steps |
| **Immersion speed** | 0.1 to 1mm/sec 0.1mm/sec steps |
| | 1 to 5mm/sec 0.5mm/sec steps |
| | 5 to 30mm/sec 5mm/sec steps |
| **Accuracy** | 0.1% full scale (0.01mN at the 10mN full scale, 0.05mN at the 50mN full scale) |
| **Maximum spacemen weight** | 10g |
| **Power supply** | 220V 60Hz or 110V 50Hz |
| **Power consumption** | 600W only main unit |
| **Net weight** | 40kg |
| **Size** | 467(W)*475(D)*556(H) mm |

We recommend preparing stable table for small sample analysis.

## Option

| |
|---|
| **Solder globule block** |
| **Rapid heat unit** |
| **Temperature Profile unit** |
| **120fps CCD Observation system** |
| **Active isolation table** |


Temperature Profile unit


**RHESCA CO., LTD.**
http://www.rhesca.co.jp
15-17,Hinohonmachi 1-chome Hino Tokyo
191-0011 Japan
TEL: +81-(0)42-582-4711
FAX: +81-(0)42-589-4686