MW-Pack 4PP

FOUR POINT PROBE MEASUREMENT SYSTEM

HIGHLIGHTS

- Compact system
- Plug and play
- Software control
- Several head probe

SPECIFICATIONS

- 10µOhm/sq to 100MOhm/sq
- 1 to 36 measuring points
- Sample size 10-300 mm
- Calculation R, Rs, T

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The MW-Pack4PP provides simple solution to sheet and bulk resistivity measurements. To make the measurements, the user lowers the four-point probe head onto sample then and cliks the *Test* button in the software. The computer automatically controls the Keithley 2400/2600 series and uses an algorithm to find the ideal current for accurate readings.

Then the measurement is saved in a table for further analysis (visualization, statistics and report). NIST traceable calibration standards are available for purchase with the system. Proper use of the standards and the calibration procedure insures the specified system accuracy of better than 1%. The standard range of the system is 1 Microohm to 100 Megaohms per square.

The MW-Pack4PP system includes four components; Keithley 2400/2600, four-point probe head, Rezist software, and S302 / S303 stand.

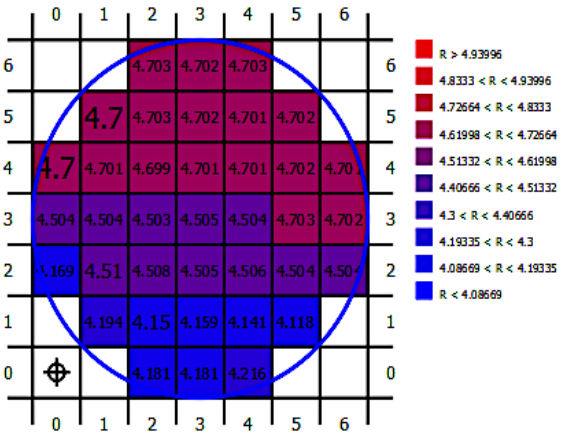
Four Point Probe heads

The SP4 is a low-cost disposable and inline probe made of Delrin and compatible with a majority of most applications. Several choices are available for configuration to your specific application. Three spacings are available 1, 1.27 and 1.6 mm. The three pressures available are 45, 85, and 180 grams. Tips are made of Tungsten Carbide or Osmium and a choice of 40, 125 or 254 µm radius.
The MW-Pack4PP includes a bayonet type quick disconnects to make changing the probe head easy.

Four Point Probe Measurement System

The 4PP stand includes several features to assure accurate resistivity measurements. A swing arm with micro switch assures the probe head is moved straight up and down and current is not applied until the probe head is adequately contacting the sample. A fine 'Z' adjustment knob on the right side allows to adjust the height of the probe over a range of 40 mm. A bayonet style quick mount allows to easily change the probe head. The sample to be tested is mounted onto a Teflon chuck and easily pushed to position. It is available in 100, 150, 200 and 300mm configurations. The stand is pre-wired and ready to connect to the Keithley Sourcemeter.

Rezist Software



The software manages the tests, displays results and allows printouts or export of the data. The user inputs the size and shape of the sample, edge exclusion and number of points to be tested. The user may also define binning criteria and which parameter (Sheet Resistance, Resistivity, or V/I) to display. A graphic picture of the target probe points is displayed. Prompts tell user to move to the next position. All along the mapping process, the average, standard deviation, minimum and maximum are prominently displayed. Upon completion, a summary report may be printed showing the data and pass/fail status. Systems allows Resistivity and Thickness measurement.

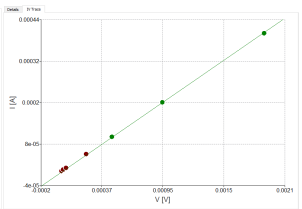
Rezist software must be run on a computer with Windows. Microworld offers two computers to choose from, a laptop or desktop style computer. A head will have to be configured according to the application and the substrate tested, a bayonet mount will be supplied with the stand.

MW-Pack4PP-model maker

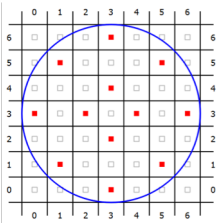
[Resistivity range] [Size]	
M	Medium resistivity range 10MicroOhm/sq to 100MOhm/sq (DC)
H	High resistivity range 1mOhm/sq to 300MOhm/sq (DC/Pulseur)
4	For samples 10-100mm
6	For samples 10-150mm
8	For samples 10-200mm
12	For samples 10-300mm

S303 up to 300 mm wafers

Keithley 2636 for High resistivity range



IV curve for Ohmic contact check



Uniformity map

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