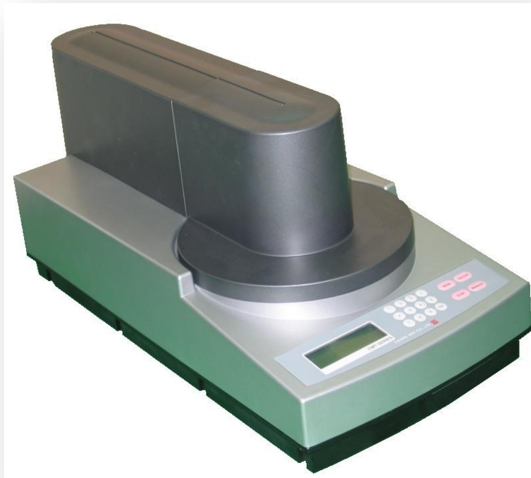
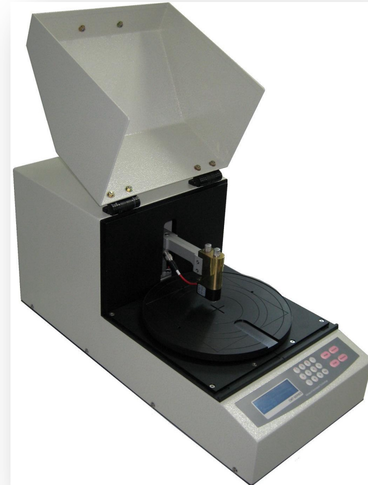
CMT SR – 2000 N or PV Mapping Sheet Resistance and Resistivity Measurement System by AIT



1: The SR2000N version



1: the SR2000PV version

The CMT SR2000 is a completely automated, mapping four point measuring system. It offers precise and fiable mapping measurements of resistivity and sheet resistance.

The unit exists in two versions. N version allows the measurement of round wafers up to 8''. The PV version, specifically designed for the photovoltaic industry, allows the measurement of square wafers 156x156mm and round wafers up to 230mm diameter.

The SR2000 comprises a current source with output 10nA to 100mA, DVM 0V to 2000mV and an accuracy of 0.2% (KRISS Circuits). The measurement accuracy is +/-0.5% (on VLSI standard wafer at 23C). The measured range goes from 1mOhm/sq to 2MOhm/sq (10uOhm*cm to 200kOhm*cm).

The JANDEL Probe Head, one of which is provided with the MultiHeight Station, can be completely customized following the user's needs (tip radius, spacing, tips arrangement and load).

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Technical characteristics:

Sheet resistance measurement	
- Measuring method	Contact, 4 point probe
- Measuring range	1 mohm/sq ÷ 2 Mohm/sq
Resistivity measurement	
- Measuring method :	Contact, 4 point probe (Input thickness)
- Measuring range :	10.0 µohm·cm ÷ 200.0 Kohm·cm
Current Source	10nA to 100mA DVM 0V to 2,000mV Accuracy: 0.2 % (KRISS Circuits)
Measurement Accuracy	± 0.5 % (VLSI Standard Wafer, @ 23°C)
Operating Software	- Measurement condition creation. - Wafer type, measure point interval, etc. - Save & load: data, wafer type, measure point, etc. - Data analysis: 2D, 3D mapping, Data map, etc. - On/Off: Remote, Vacuum. - Data & mapping printout.
Measurement Mode (SW)	-Auto measurement (mapping via software). -Quick measurement: ASTM & SEMI Mode. -Point measurement: by mouse-click.
Wafer Size	-N Version: round wafers, 8'' maximum diameter -PV Version: round or square wafers, 156x156 mm maximum size. All versions, maximum thickness 6 mm.

MDC
Materials Development Corp
Genève

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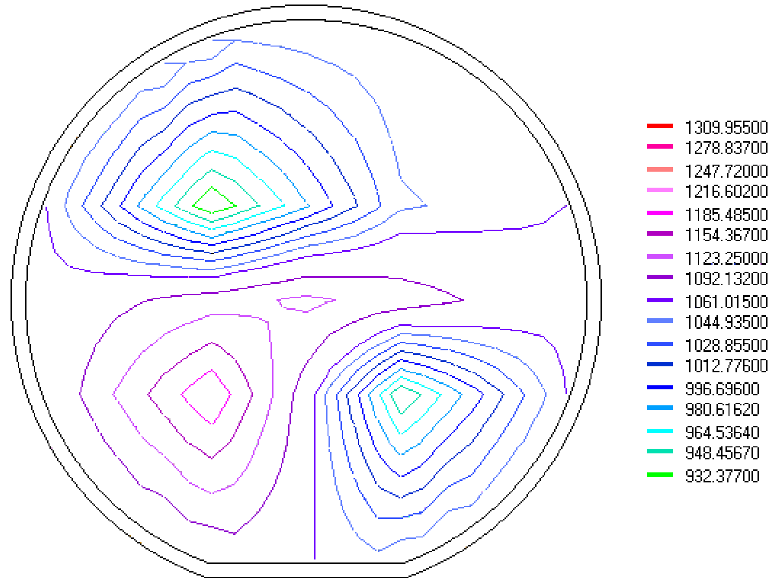
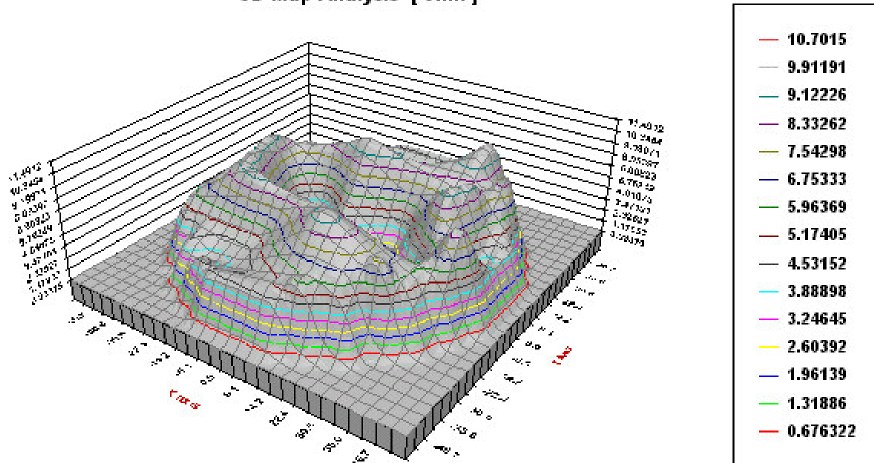
Some examples of mapping measurements:

Contour Map Analysis [ohm / sq]



1. Sample ID : test000001
2. Sample Type : samtype001 [Size (mm) - Sample: 203.2, Flat: 6, Exclusion: 5]
3. Measure Mode : None
4. Thickness : 0.01
5. Date/Time : 오후 1:04:26

3D Map Analysis [ohm]



1. Sample ID : test000006
2. Sample Type : None [Size (mm) - X: 101.6, Y: 4, Exclusion: 4]
3. Measure Mode : None
4. Thickness : 0.0
5. Date/Time : 1998년 11월 16일 월요일 오후 7:38:04
6. Op.ID : sjs
7. Analysis [ohm]
   1) Max : 11.49119 2) Min : 0.03379 3) Ave : 5.17405
   4) StDev : 0.66030 5) Uni : 99.41362 6) Max-Min : 11.45740