

4PP 280I

Sheet Resistivity



Applications

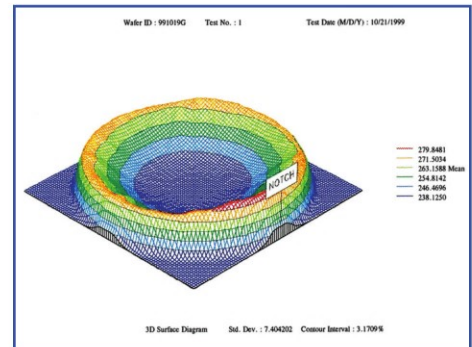
4 Dimensions' 4 Point Probe systems measure the sheet resistivity of a wide range of materials. The 280I system can easily measure resistivity in applications including:

- Silicon Substrates
- Epitaxial Layers
- SOI
- Ion Implant Dose & Uniformity
- Poly Resistivity & Thickness
- Metal Deposition Monitoring
- Silicide Process Monitoring
- Ion Implant Diffusion
- Poly Gate Process Monitoring

Precision Resistivity Measurement

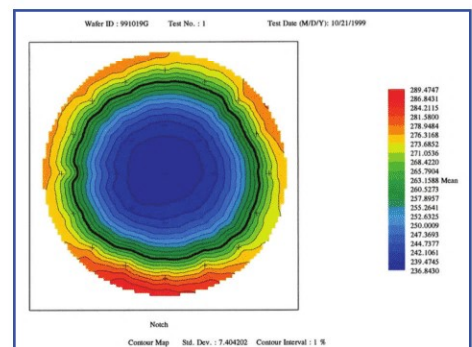
The industry leading 4 Dimensions 4 Point Probe Sheet Resistance System features unmatched accuracy and repeatability built on a Windows 7 platform. User Friendly "One-touch" operation and Auto-Calibration measures 50 sites in 90 seconds. Measure Resistivity and Thickness on a wide variety of materials.

Measurements range from 1mΩ/sq to 800kΩ/sq, extending up to 8EI IΩ/sq



Powerful Windows-Based Software

- Data storage for millions of data sets
- Librarian data searching program for quick and easy retrieval
- Individual site multiplier
- Site dependent geometric correction
- Detecting P-N type
- Cartesian-Arrayed Mapping
- Polar Coordinated Mapping
- Diameter Scan
- Custom test sites
- Automatic thickness compensation
- Thin metal film corrections
- Personalized recipes



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4PP 280 I

Sheet Resistivity



Specifications

Wafer Sizes	50, 75, 100, 125, 200mm
Test Diameter	Up to 3mm from wafer edge
Quick-Checks	1, 5, 9 sites, 5, 6, 9, 10, 13 site ASTM/SEMI X-patterns or custom sites
Cartesian Maps	Any site-interval ≥ 0.1 mm, Up to 6000 sites
Polar Map Sites	9, 25, 45, 49, 65, 81, 121, 169, 225, 289, 361, 441, 529, 625
Diameter Scans	Any site interval to nearest mm
Range	1m /sq. to 800k /sq. or 8E9 /sq.
Units	/sq., -cm, V/I, μ [T], $\text{\AA}$ [T]
Repeatability	<0.2% (typical)
Accuracy	<0.1% (precision resistor)
Current Resolution	16 Bit A/D
Compliance Voltage	125V

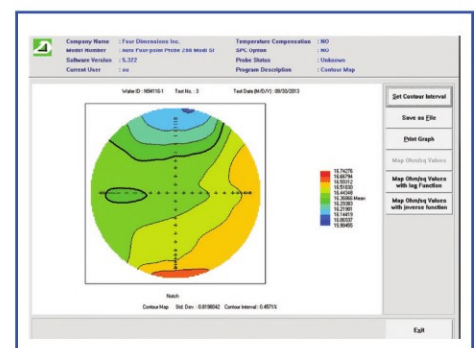
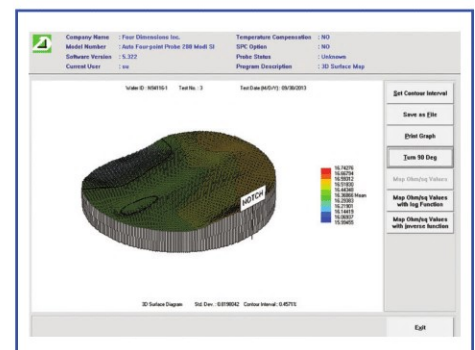
Probes

Probe Spacing	1mm (Standard)
Probe Force Range	90g – 180g (Standard) others available

Type	Tip Radius (μ)	Material	Application
A	25	WC	Bulk, Thick Epi, Metals
B	100	WC	General
M	300	WC	Implant, Diffusion
N	500	WC	Shallow Implant, Thin Epi

Reliable and Easy to Maintain

- Capable of making measurements without a computer.
- Standard resistor network and firmware allowing easy and quick electronic calibration.
- Assembled with easily replaceable modules.
- Optional trouble shooting kits available for quick and easy on-site troubleshooting.
- Diagnostic program available for hardware and software.
- Low price, precision, durable probe head.



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