Toho TECHNOLOGY

FOURDIMENSIONS Inc. Advanced Metrology System

4PP 2801

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

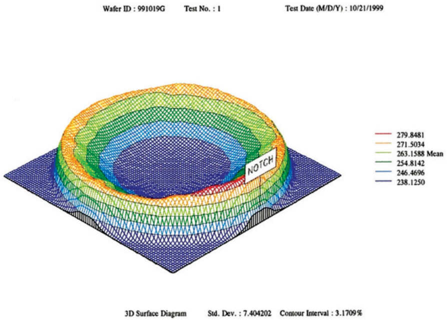
Precision Resistivity Measurement

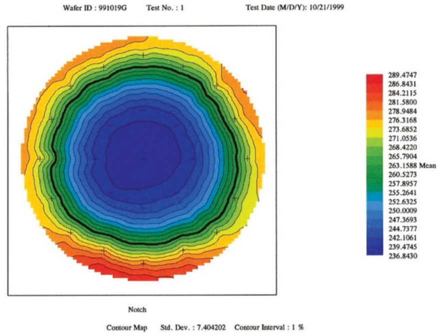
The industry leading 4 Dimensions 4 Point Probe Sheet Resistance System features unmatched accuracy and repeatability built on a Windows 11 platform. User friendly "One-touch" operation and Auto-Calibration measures 50sites in 90 seconds. Measure Resistivity and Thickness on a wide variety of materials.

Measurements range from 1mΩ/sq to 800kΩ/sq, extending up to $8^{11}\Omega$/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
- Automatic thickness compensation
- Cartesian-Arrayed
- Mapping
- Polar Coordinated Mapping
- Diameter Scan
- Custom test sites
- Thin metal film corrections
- Personalized recipes
- Detecting P-N type





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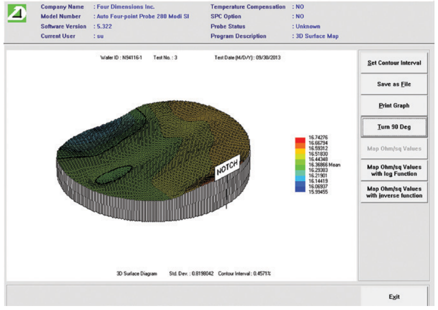
SHEET
Resistivity

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.

Specifications

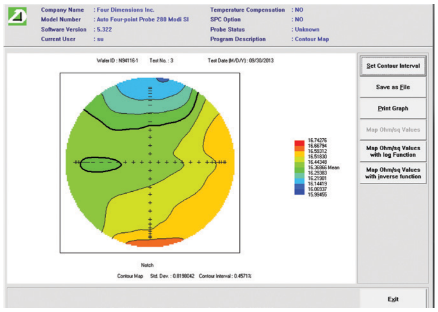
Wafer Sizes	50, 75, 100, 125, 200mm
Test Diameter	Up to 3mm from wafer edge
Quick-Checks	1, 5, 9 sites, 5, 6, 9, 10, 13 site ASTM/SEMI X-patterns or custom sites
Cartesian Maps	Any site-interval ≥ 0.1 mm, Up to 6000 sites
Polar Map Sites	9, 25, 45, 49, 65, 81, 121, 169, 225, 289, 361, 441, 529, 625
Diameter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



Company Name : Four Dimensions Inc.
Model Number : Auto Four-point Probe 280 Modi SI
Software Version : 5.322
Current User : su
Temperature Compensation : NO
SPC Option : NO
Probe Status : Unknown
Program Description : 3D Surface Map

Wafer ID : N94116-1 Test No. : 3 Test Date (M/D/Y) : 09/30/2013

3D Surface Diagram Std. Dev. : 0.8198042 Contour Interval : 0.4571%



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Probes

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

Range

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