

# Model : NC-80MAP

## Non-contact sheet resistance measurement system



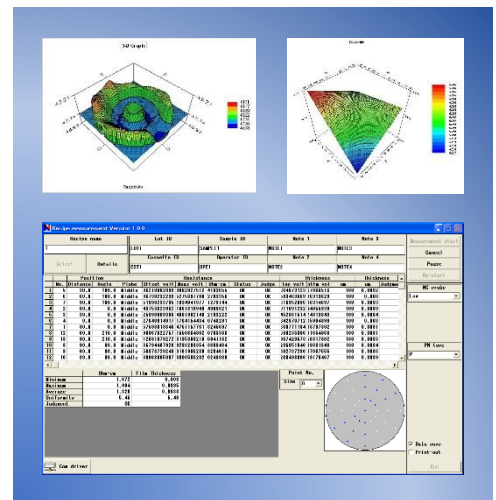
The NC-80MAP measures sheet resistance for GaAs, GaN, SiC wafer and metal layer etc. without contacting (Eddy current measurement method). It provides high accuracy/high tact measurement. It can be expanded to fully automatic system with robot and cassette station.

### Feature and function

- \*Multi-points measurement and Mapping display (and 2-D map / 3-D map graphic display with maximum 217 points)
- \*Wide ranges measurement and high accuracy with Non-contact eddy current probes
- \*Mapping program software
  - Arranged in a concentric multipoint pattern measurement is programmed (maximum 217 points) and random pattern is programmable by operator.
  - SPC charts and 2-D, 3-D mapping software.
  - SPC chart function includes Ave, Max, Min and each limit(Upper/Lower control and setting), and Uniformity (% , Standard deviation)
- \*Wafer load/unload function and the aligner unit.
- \*2 ~ 8-inch wafer measurement is available
- \*Easy operation by Windows 10 system software
- \*Measurement data base link with Excel via CSV format file

### Specifications

Probe type	Measurement Range
(1) Super Low	0.005 ~ 0.01 ohm/sq (0.00025 ~ 0.0005 ohm.cm)
(2) Low	0.01 ~ 0.5 ohm/sq (0.0005 - 0.025 ohm.cm)
(3) Middle	0.5 ~ 10 ohm/sq (0.025 - 0.5 ohm.cm)
(4) High / Super High	10 ~ 3200 ohm/sq (0.5 ~ 160 ohm.cm)



- \*Diameter of probe cores : 14 mm diameter (5 mm is available : S-Low, Low)
- \*Resistivity range for each probe type(ohm.cm) assumed thickness : 500µm.
- \* Resistivity is a reference value due to variations with sample thickness.

## Measurement accuracy performance

Conforms to ASTM F673.

NIST or VLSI wafers are used for the measurements below. They are manually placed on the instrument stage and driven with a gap of 1.7-2 mm.

### Linearity (Less than)

Measurement Range	%
0.005 ~ 0.01 ohm/sq	±2 %
0.01 ~ 0.05 ohm/sq	±2 %
0.05 ~ 10 ohm/sq	±2 %
10 ~ 1000 ohm/sq	±2 %
1000 ~ 3200 ohm/sq	±3 %

### Repeatability

\*CV = STDEV/AVG × 100%  
Repeatability by each ohm/sq (% of one sigma) and 10 times measurement (same site of the certified area of NIST and/or VLSI standards).

Measurement Range	%
0.005 ~ 0.01 ohm/sq	0.1 %
0.01 ~ 0.05 ohm/sq	0.1 %
0.05 ~ 10 ohm/sq	0.1 %
10 ~ 1000 ohm/sq	0.2 %
1000 ~ 3000 ohm/sq	0.7 %

### Throughput (Tact time)

Points	Line (φ4" wafer)	Circle (φ4" wafer)	Line (φ8" wafer)	Circle (φ8" wafer)
1	4s(±1s)	4s(±1s)	4s(±1s)	4s(±1s)
5	13s(±1s)	18s(±1s)	14s(±1s)	19s(±1s)
9	-	20S(±2S)	-	22S(±2S)
17	-	35S(±2S)	-	38S(±2S)
37	-	55S(±3S)	-	60S(±3S)
121	-	125s(±5S)	-	136s(±5S)
217	-	205s(±8S)	-	220s(±8S)

☆ Please visit our website for [the movie of this system.](#)

\*Please contact us for more details.

\*The customers are always welcome to do Demo measurement.

\*Specification subject to change without notice.