



Panel Measuring Table

Coating Thickness Measurement and Quality Control

Fast and precise measuring of PCB copper thickness for monitoring of etching and plating processes. The measuring report gives information about the minimum, maximum and average value as well as the standard deviations.

Details

The panel measuring table offers a quick determination of the etching distribution after differential etching processes or the plating build-up of copper surfaces. The measurements are carried out fully automatically by a resistive sensor after entering the input parameters.

Subsequently, the measuring points are evaluated by a PC and converted into a 3D diagram, statistics tool included.

Technical Data

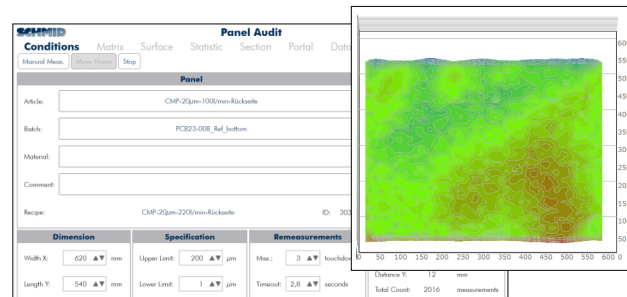
- Dimensions: 1200 x 1120 x 1210 mm (L x W x H)
- Weight: 200 kg
- Maximum panel size: 650 x 650 mm
- Measuring range:
copper thicknesses 1 μm - 120 μm
- Measuring tolerances:
0.1 μm - 10 μm
Cu layer 0.1 μm - 5 μm : $\pm 0.075 \mu\text{m}$
Cu layer 5 μm - 10 μm : $\pm < 1,5 \% 5 \mu\text{m} - 120 \mu\text{m}$
Cu layer 5 μm - 50 μm : $\pm 0.5 \mu\text{m}$ Cu
layer 50 μm - 80 μm : $\pm < 1 \%$
Cu layer 80 μm - 120 μm : $\pm < 2 \%$

Parameter Input:

- Panel dimensions in X and Y direction
- Measuring point distance from panel edge
- Number of measuring points in X and Y direction
- Graphical feedback if out of specification
- Measuring specification
- Individual selection of measuring points

Data Output by Excel file:

- Maximum and minimum value
- Average value
- Standard deviation
- 3D and line diagrams with measuring report
- CP and CPK analysis
- All values stored in a SQL server (database)



Statistical and 3D view of a measured panel

Advantages

- Precise and repeatable: fully automated measurement avoids manual handling and operation error
- Fast: 100 measuring points in 3.5 min
- Flexible: accommodates variable panel formats
- Quality control of etching and plating processes
- Process drifts are easy to spot and to correct
- Reduction of yield loss by early detection

