

# EddyCus® TF map 5050RM – Resistivity Imaging Device

P\_T\_5050RM\_21



## Highlights

- ► Electrical integrity imaging
- ► High resolution imaging (25 to 1,000,000 points)
- ▶ Defect imaging
- ► Mapping of encapsulated layers

### **Device Series**

- ► Metal thickness (nm, µm)
- ► Sheet resistance (Ohm/sq)
- ► Emissivity
- ► Conductivity / resistivity (mOhm cm)
- ► Electrical anisotropy (%)
- ▶ Weight (g/m²) and drying status (%)
- ▶ Permeability (H/m) Beta

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# **Applications**

- ► Wafer resistivity imaging
- ▶ Ingot and boule resistivity imaging
- ► Sputter target composition imaging
- ► Purity assessment
- ► Electrical discharge machining
- Material sorting (map: homogeneity assessment)
- ► Melting, casting, sintering
- ▶ Defect imaging and integrity assessment

### Materials

- Semiconductors
  - ► Si (mono, poly)
  - ► SiC, SiSiC
  - GaAs
- ► GaN
- Alloys
- Metals
- ► Graphite
- ► Graphene
- ► Compounds
- Composites

Engineered and Made in Germany





## EddyCus® TF map 5050RM – Resistivity Imaging Device



Measurement technology	High frequency eddy current sensor
Substrates	Flat, slightly curved
Materials	Wafer, boules, pucks, plates, thin film
Max. scanning area	20 inch / 500 mm x 500 mm x 10 mm
Edge effect correction / exclusion	2 – 10 mm (depending on size, range, setup and requirements)
Max. sample thickness / sensor gap	3 / 5 / 10 / 25 mm (defined by the thickest sample)
Resistivity range accuracy can be optimized within a customer specified range	0.002 – 0.1 mOhm cm 0.1 – 100 mOhm cm 100 – 1,000 mOhm cm
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Scanning pitch  Measurement points per time (square shaped samples)	1 / 2 / 5 / 10 mm (other upon request)  100 measurement points in 5 minutes  10,000 measurement points in 5 minutes
Scanning time	8 inch / 200 mm x 200 mm in 0.5 to 5 minutes (1 $-$ 10 mm pitch) 12 inch / 300 mm x 300 mm in 1.5 to 15 minutes (1 $-$ 10 mm pitch)
Device dimensions (w/h/d) / weight	46.5" x 11.4" x 35.4" / 1,180 mm x 290 mm x 900 mm / 120 kg
Further available features	Metal thickness imaging, anisotropy and sheet resistance sensor

#### Device Control and Software

- Pre-defined measurement and product recipes (sizes, pitches, thresholds)
- ▶ Line scan, histogram and area analysis
- ▶ Black and colored image coding
- ► Csv & pdf export
- ► SPC summary and export
- ▶ 3 user levels
- ▶ Material database for parameter conversion
- ► Edge effect compensation
- ► Storage and import of data
- ► Export of data sets (e.g. to EddyEva, MS Excel, Origin)



