SRP-2100i

SPREADING RESISTANCE PROFILING with I-V capability

Structure determination and profile monitoring of compound semiconductors and measurement of resistivity and carrier density profiles in all silicon semiconductor structures of device processing.

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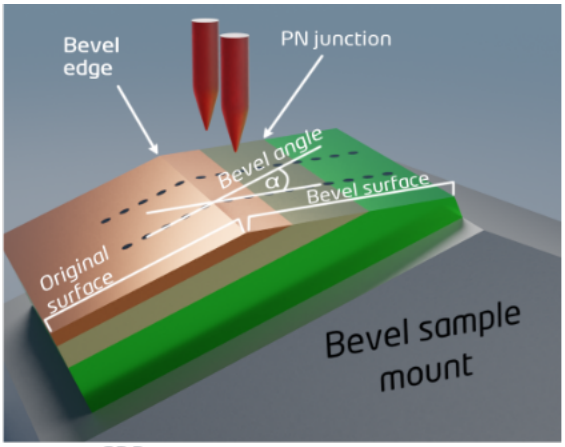


SRP measurement arrangement

Measured parameters

- Dopant concentration and resistivity on Si material
- Carrier density and resistivity profile shape
- Resistance profile on compound semiconductors: AlGaAs, GaAs, GaN, Ga_2O_3, InP, SiC
- AlGaN/GaN HEMT structures
- Junction depth
- Transition width
- Sheet resistance
- Electrically activated dose
- Bevel Angle Measurement (BAM)

Applications

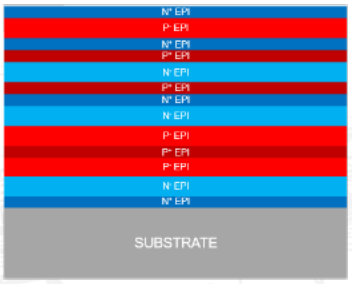
- Resistivity and doping depth profile determination in silicon semiconductor epitaxial layers
- Process monitoring of ion implantation
- Real structure determination of final devices
- Measurement on patterned samples

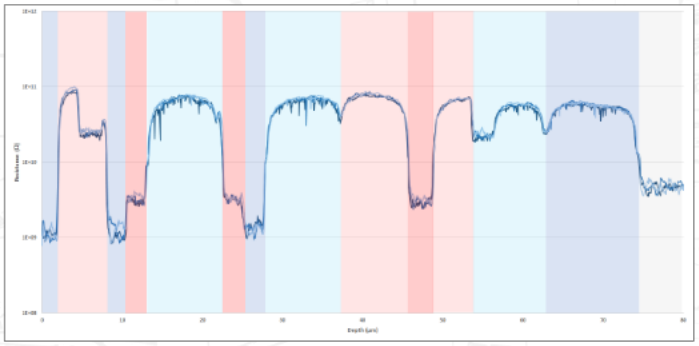
Options

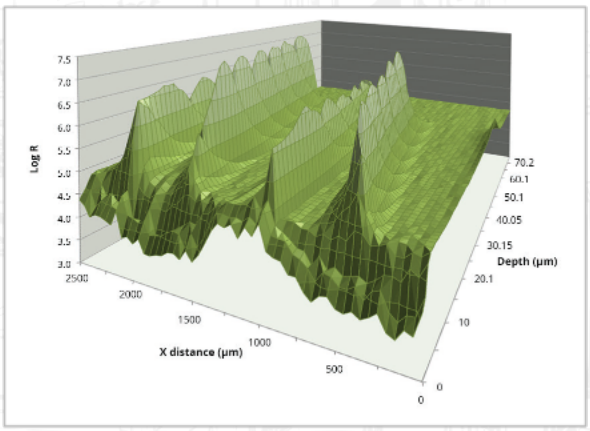
- PCIV option for wide bandgap and SOI application: combines variable measurement bias and current-voltage curve analysis to measure spreading resistance profile on novel semiconductor materials
- Iterative PCIV software option (iPCIV): designed to measure highly variable samples with very high resistance value (ideal below 1E-11 A current range)
- Shallow Layer Measurement (SLM): extending the SRP technique to determine thin layer structure
- Variable Probe Spacing (VPS): motorized probe spacing movement allows the measurement of sheet resistance of thin isolated layers
- Temperature Controlled Measurement Chamber
- Signal Tower: standard industrial signal tower which gives information on system status
- Stand-Alone Bevel sample polishing unit

Features

- Ultrawide measurement range, flexible application
- High resolution, non-overlapping measurement
- Transition zone, junction depth calculation
- In-Situ Bevel Angle Measurement (BAM)
- Ready to upgrade with PCIV option
- Low noise, ultrahigh precision stage
- Effective, high quality vibration and acoustic isolation
- Touch-driven user interface and user-friendly software




Characterization of complex SiC layer structure



Depth profile of p-type fingers in n-substrate

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