

Axion® T2000

High resolution CD-SAXS metrology system provides fast, accurate, non-destructive, 3D shape measurements for complex, high aspect ratio 3D NAND and DRAM device structures

BENEFITS:

The Axion® T2000 leverages innovative X-ray technology to identify subtle structural variations that can affect memory device functionality or performance. By providing high resolution, non-destructive 3D device shape measurements, the Axion T2000 helps advanced memory manufacturers:

- Achieve fast cycles of learning during R&D, thereby reducing dependence on long lead time, destructive measurement methods such as FIB-SEM, TEM and cross-section SEM
- Accelerate ramp cycle time through fast and accurate characterization and optimization of new processes, design nodes and devices
- Monitor key process steps inline to ensure variations that affect device quality are identified and addressed quickly during high volume production

TECHNOLOGIES:

- Non-destructive CD-SAXS measurement technique
- High flux X-ray source
- Largest diffraction order separation
- High resolution detector
- Precision motion control with market-leading dynamic range AOI (angle of incidence) stage
- AcuShape® modeling

APPLICATIONS:

- Process characterization and optimization
- Engineering analysis
- Inline process monitoring
- Etch process tool monitoring
- Post-PM (preventative maintenance) etch process tool qualification



MARKET:

Chip manufacturing

advanced design node memory devices, including 3D NAND and DRAM

PLATFORM:

- Customizable configurations
- Extendible
- 300mm wafers