3D STACKING TECHNOLOGY OPTIMIZATION THROUGH ASSOCIATED METROLOGY

« SELLING » STATEMENT:

A novel industrial process control plan enabling both alignment and void inspection

The prototype of a product for optical inspection of bonding quality and alignment measurement

KEY FEATURES

Demonstrated within VIZTA:

Alignment inspection

- Short term reproducibility ~8nm (3σ)
- Long term (1.5 months) reproducibility ~ 15 nm (3σ)

Bonded wafer void inspection

- Image scanning capability with 1 µm, 2 µm, 8 µm / pixel selectable resolutions
- Die-to-die inspection

Main capabilities

Check misalignment errors and void defects between the bonded wafers.

Still some research

Defect finding algorithms improvement

Increase throughput

Capability to add polarization to the imaging path thus revealing residual stress and defects

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