Business from technology

Project Name: FE-I4_proto
Project Number: 75909

Readout Wafer Cracked at Tape Removal
(Wafer ID V6ABC1H)

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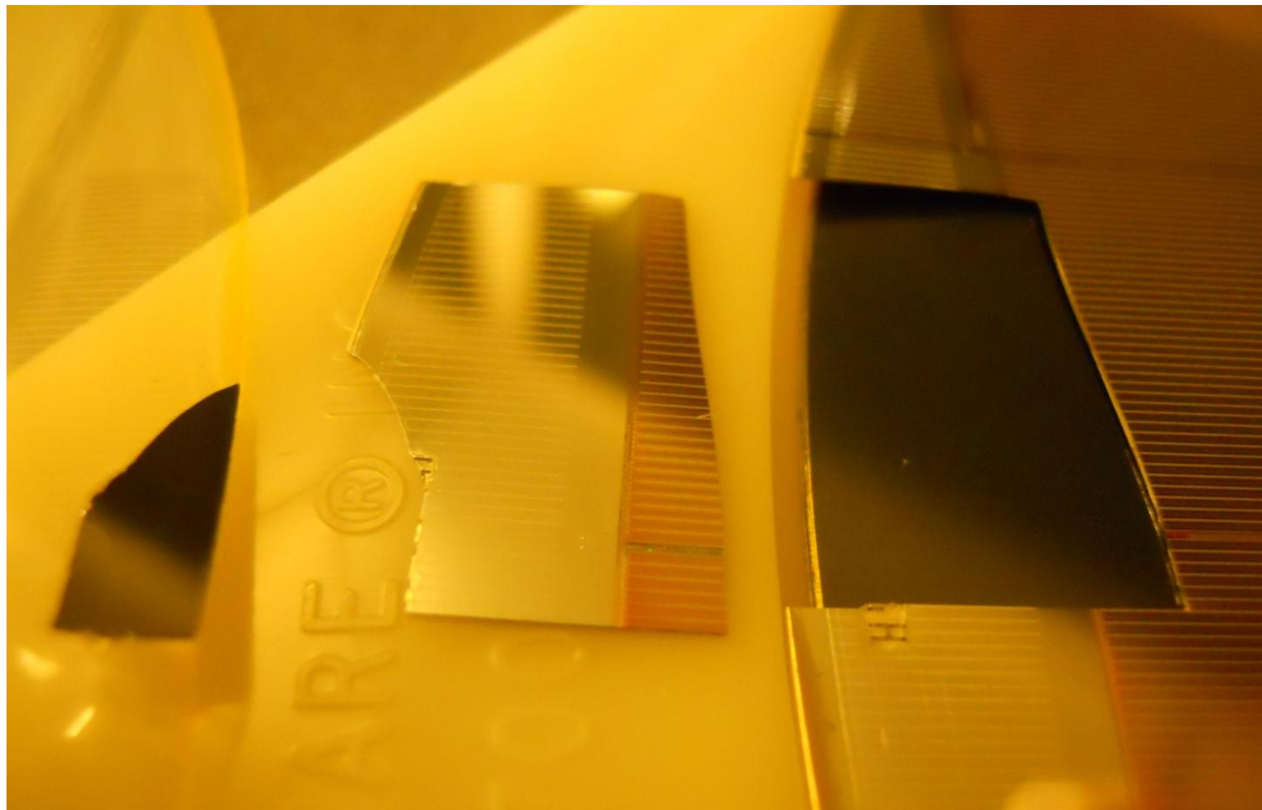
Readout Wafer (V6ABC1H) Cracked at Tape Removal

- A protective tape is used to protect the bumped front side of the wafer during thinning (back grinding & etching).
- Back grinding damage layer removal (wet spin etching) was done on March 15, 2012, and the protective tape was removed on March 16, 2012 (UV exposure is used to release the tape).
- The tape had become stuck to a laser-engraved wafer ID near the edge of the wafer (opposite edge to notch). From the rest of the wafer, as well as from a bumped & thinned test wafer) the tape came off easily. UV exposure was done twice, but it did not help.
- A piece of the wafer came off with the tape, and this initiated a crack, which will lead to a loss of ~9 chips.
- We will know the number of surviving chips more accurately after dicing.
- See photos on the next two slides.

Readout Wafer (V6ABC1H) in Three Pieces After Tape Removal

- A small piece (with wafer ID) still on tape (left), a larger loose piece (center), and the rest of the wafer (right).



Tape Stuck on Wafer ID (V6ABC1H)

- Laser-engraved wafer ID on a small chipped-off piece of wafer as seen through tape.

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