國家實驗研究院
NATIONAL INSTITUTES OF APPLIED RESEARCH

Comprehensive Ion Implanter Service - Notes

Notes (1)

1. Please fill out the application form thoroughly. (e.g., Ion type, energy, dose)
2. Implantation energy: 1~200 keV; Dose: 1E12~1E16.
3. Energy ≦ 5keV (Dose: 5E14~5E15); Energy > 40keV (Dose: ≦5E15).
4. For samples smaller than 6 inches, they must be securely affixed with vacuum tape onto a 6-inch or 8-inch carrier wafer. Do not attach anything (including broken wafers or vacuum tape) within 2 cm of the outer edge or on the back side of the 6-inch or 8-inch carrier wafer.
5. We are not responsible for any breakage if non-standard wafers are used as indicated below during installation or implantation.

- 4-inch and 6-inch wafers require clips and must be mounted in 8-inch carriers, which carries a risk of breakage.
- Poorly secured broken wafers risk breaking or falling off during processing.
- Wafers that are too thin or too thick have a higher risk of breakage or chipping.
- 4-inch and 6-inch wafers that are too thick cannot be properly mounted on carriers.
- Wafers that do not fit carriers well may be tightly clamped, increasing breakage risk.
- Two 8-inch wafers stuck together are heavier than standard wafers; the vacuum pickup tool may drop them.

Notes (2)

- Broken wafers may be used as a masking layer for samples.

6. Please contact the machine responsible engineer to discuss the feasibility of non-standard processes. Please contact the machine responsible engineer for any questions prior to sending the application.
7. If photoresists are used, a hard bake is mandatory.
8. For the medium-current implanter: the tilt angle must not exceed 60°. If the tilt and twist angles are not specified, the default values are Tilt: 7°, Twist: 22°.
9. For the high-precision ion implanter: the tilt angle must not exceed 45°. If the tilt and twist angles are not specified, the default values are Tilt: 7°, Twist: 76 °.
10. Do not submit wafers with large-area metal films on the surface layer.