

Introduction

This guideline describes the requirements for dicing wafers manufactured by IDT. It applies to both IDT internal sawing operations and to sawing procedures used by customers purchasing un-sawn wafers. Failure to follow these guidelines could result in lower yields and immediate or delayed operational failures including data loss – particularly failures related to EEPROM data retention.

Disclaimer: These dicing practices are industry standard norms. IDT is not responsible for issues related to dicing performed by wafer sawing service providers; it is the responsibility of the customer or subcontractor to ensure adherence to industry standards.

1 Dicing Guidelines

These industry standard guidelines must be followed for dicing IDT products:

- Dicing equipment and all related infrastructure used during sawing processes must meet the common ESD safety standards of the semiconductor industry.
- Ionizers must be installed in areas where sawing processes are completed.
- **Important Recommendation:** The resistivity of water used for sawing or assembly (after CO₂ bubbler) must be $\leq 0.5 \text{ M}\Omega \text{ cm}$. (IDT requirements exceed the industry standard. The industry standard is approximately $1 \text{ M}\Omega \text{ cm}$.)
- Use contactless wafer mounting.
- Use UV tape if die size $< 1\text{mm} \times 1\text{mm}$.
- If using a step cut sawing mode, use a double-spindle sawing machine.

2 Related Documents

For product-specific die dimensions and additional important information, please submit a support request at www.IDT.com/go/support.

Visit the product page for the specific IDT IC on IDT's website www.IDT.com or contact your nearest sales office for the latest version of this document and the product's data sheet.

Note: For some products, special precautions are needed before sawing to preserve EEPROM settings. In this case, the recommended procedures are documented in the product's data sheet.

3 Document Revision History

| Revision | Date | Description |
|----------|--------------------|---|
| 1.00 | September 11, 2009 | First release of document |
| 1.10 | November 15, 2013 | Addition of requirements for contactless wafer mounting and UV tape. Addition of equipment requirements when using step cut sawing mode. Update for contact information and imagery for cover and headings. Addition of "Related Documents" section. |
| | April 1, 2016 | Changed to IDT branding. |

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