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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 13387-2009

Replacing GB/T 13387-1992

**Test method for measuring flat length wafers of silicon and
other electronic materials**

硅及其它电子材料晶片参考面长度测量方法

(English Translation)

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Table of Contents

Foreword
2 Range
3 Limitations
4 Normative References
5 Terms

Foreword

This revised standard adopts SEMIMF671-0705 "silicon wafer reference surface and the length of the test method other electronic materials." the standards are compared with SEMIMF671-0705 major changes as follows.

- Standard format prepared according to GB/T 1.1 requirements to prepare;
- Increased foreword content.

This standard replaces GB/T 13387-1992 "Electronic Materials wafer reference surface length of the test method." the standards are compared with the GB/T 13387-1992 main changes as follows.

- Detailed the contents of the measuring range, as the process involved in metric units;
- Increase the limitations of this method;
- An increase of some terms and definitions used in measuring the offset;
- Increasing the reference standard;
- Original standard sample to sample chapters;
- The calibration and measurement is divided into two chapters are described separately;
- Evaluation SEMIMF671-0705 precision using multiple laboratories, together with a more detailed explanation.

This standard by the National Standardization Technical Committee of semiconductor equipment and materials proposed.

This standard by the National Standardization Technical Committee materials and equipment at the Technical Committee of semiconductor material.

This standard was drafted. Grinm Semiconductor Materials Co., Ltd.

2 Range

2.1

standard covers the flat portion of the wafer edge length confirmation method.

2.2

standard for nominal circular wafer edge straight section length is less than equal to 65mm electrical material. This standard only silicon accuracy Confirmation, the accuracy is not expected due to material change.

2.3

measurement standard applies to arbitration, when the limit is higher than the accuracy requirements with a ruler and a visual inspection can be obtained by the present standards for routine inspection measurements.

2.4

standard has nothing to do with the surface finish.

2.5

The diameter of the wafer, including 76.2mm and smaller diameter wafers, flat length units should use the metric units of measurement, the value imperial units are for reference only.

2.6

standard does not address safety issues, if any, associated with the use of standards. Standard before use, to establish appropriate safety and security measures Shi and determine the scope of application of rules and regulations is the responsibility of the user of this standard.

3 Limitations

Some processes such as chamfer 3.1 after slicing and chemical corrosion are likely to reduce the clarity of the reference surface area of the edge portion.

Rotation of the screw measuring 3.2 micrometer backwards may cause erroneous readings.

Samples measuring 3.3 on the projector screen during the unfocused images may introduce errors.

3.4

projector optical system may sometimes there is an image inversion function, resulting in the image presented in this standard the opposite state.

4 Normative References

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 2828.1 Sampling procedures for inspection - Part 1. by acceptance quality limit (AQL) retrieval batch inspection sampling plan GB/T 14264 semiconductor material terms

5 Terms

GB/T 14264 and the following definitions of terms apply to this standard.

Wafer edge region of the reference surface from the horizontal to the vertical reference line deviation on either side of the edge region of the reference surface, used to define the reference plane Border.