

Record of Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: [Taiwan](#)

Global Technical Committee: [3D Packaging and Integration](#)

TC Chapter Cochairs: [Wendy Chen/ KYEC](#), [Chien-Chung Lin/ITRI](#)

Standards Staff: [Dean Chang](#)

| | Scheduled in Background Statement | Actual |
|--------------------------------------------------------|-----------------------------------------------|------------------------------------|
| Date | 01/09/2018 | 01/09/2018 |
| Location | SEMI Taiwan Office | SEMI Taiwan Office |
| Reason for Change of Date and/or Location (if changed) | Due to delay the cycle voting | |

Note: See [Regulations ¶ 9.5](#) Exception for allowable reason to change.

I. Document Number and Title

| | |
|------------------------------------------------|-------------------------------------------------------------------------------------------|
| Document Number 5800 | Document Title Guide for Wafer Edge Trimming for 3DS-IC Process |
|------------------------------------------------|-------------------------------------------------------------------------------------------|

II. Tally

Standards staff to fill in.

Voting Tally: [As-cast tally after close of voting period](#)

Note: A minimum of 60% of the Voting Interests that have TC Members within the global technical committee that issued the Letter Ballot must return Votes. ([Regulations ¶ 9.7.1.1](#))

Voting Tally (with example values):

| Voting Interest: | Returned Votes | | Distribution | | Return Rate | |
|---------------------------|--------------------|---|---------------------------|---|-----------------------|------|
| Letter Ballot | 70 | ÷ | 116 | = | 60.3% | ≥60% |
| Intercommittee Ballot | 30 | | | | | |
| Voting Interest Reject(s) | 0 | | Total Voters with Rejects | | 0 | |
| Voting Interest Accept(s) | 53 | | | | | |

Note: See [Regulations § 3.2.1](#) for definition of Voting Interest.

III. Rejects
None

IV. Other Technical Issues
None

V. Comments

V- (i) Voters' Comments

Commenter 1 (Shimamoto, Haruo / AFF_AIST) - Comment 1

| | | | |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Comment | Need the detail discription about the dimensions of notch for 300mm Wafer and faset for 200mm Wafer. And need some guide for particle which damage the wafer. | | |
| | | | |
| Action | The TC Chapter agreed to do one of the following actions. | | |
| | *No motion is required in this step. | | |
| | X | Already addressed by Commenter 1, Comment 1 | |
| | | No further action was taken by the TC Chapter. | |
| | | Refer to the TF for more consideration. | |
| | | New Business | |
| | | Editorial Change | |
| | Options for editorial change (check one) | <input type="checkbox"/> Case 1: No vote in this section: <i>To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.</i> | |
| | | <input type="checkbox"/> Case 2: Voted in this section: <i>Original section number and at least one full sentence are required in "FROM" and "TO" fields.</i> | |
| | Editorial Changes | 1 | FROM: Section/Paragraph xxx |
| | | | TO: Section/Paragraph xxx |
| Justification (If necessary) | | | |
| Editorial Changes | 2 | FROM: Section/Paragraph xxx | |
| | | TO: Section/Paragraph xxx | |
| | | Justification (If necessary) | |
| Motion | To approve the decision not to take action by TC chapter | | |
| Motion by/2 nd by | | | |

| | |
|------------|---------------|
| Discussion | |
| Vote | Y- N; Motion. |

This table is needed for each Comment.

Commenter 2 (Allen, Richard / AFF_NIST) - Comment 1

| | | |
|------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | If this gets re-worked, I would be interested in participating. | |
| | | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input checked="" type="checkbox"/> | No further action was taken by the TC Chapter. |
| | <input type="checkbox"/> | Refer to the TF for more consideration. |
| | <input type="checkbox"/> | New Business |
| <input type="checkbox"/> | Editorial Change | |
| | Options for editorial change (check one) | <input type="checkbox"/> Case 1: No vote in this section: <i>To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.</i> |
| | | <input type="checkbox"/> Case 2: Voted in this section: <i>Original section number and at least one full sentence are required in "FROM" and "TO" fields.</i> |
| | | |
| Editorial Changes | 1 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| | 2 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Name (Company)/Name (Company) | |
| Discussion | XXXX | |
| Vote | XX Y-XX N; Motion passed/failed. | |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 1

| | | |
|----------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | |
| | 6.2 “Due to” might be replaced with “Because”. | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. |
| | <input type="checkbox"/> | Refer to the TF for more consideration. |
| | <input type="checkbox"/> | New Business |
| | <input checked="" type="checkbox"/> | Editorial Change |
| Editorial Changes | Options for editorial change (check one) | <input checked="" type="checkbox"/> Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | | <input type="checkbox"/> Case 2: Voted in this section: Original section number and at least one full sentence are required in “FROM” and “TO” fields. |
| | 1 | FROM: Section/Paragraph 6.2 “Due to” |
| | | TO: Section/Paragraph 6.2 “Because” |
| Justification (If necessary) “Due to” changed to “Because”. | | |
| 2 | FROM: Section/Paragraph xxx | |
| | TO: Section/Paragraph xxx | |
| | Justification (If necessary) | |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) | |
| Discussion | XXXX | |
| Vote | 9 Y- 0 N; Motion passed | |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 2

| | | |
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| Comment | There are quite a few unclear descriptions as well as grammatical errors. | |
| | 6.3.1 “0.5mm +/- 10%” should be “0.5 mm ± 10%”. | |

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|------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Action | The TC Chapter agreed to do one of the following actions. | | |
| | *No motion is required in this step. | | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # | |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. | |
| | <input type="checkbox"/> | Refer to the TF for more consideration. | |
| | <input type="checkbox"/> | New Business | |
| <input checked="" type="checkbox"/> | Editorial Change | | |
| | Options for editorial change (check one) | <input checked="" type="checkbox"/> Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. | |
| | | <input type="checkbox"/> Case 2: Voted in this section: Original section number and at least one full sentence are required in "FROM" and "TO" fields. | |
| | Editorial Changes | 1 | FROM: Section/Paragraph 6.3.1 "0.5mm +/- 10%" |
| | | | TO: Section/Paragraph 6.3.1 "0.5 mm ± 10%". |
| Justification (If necessary) 6.3.1 "0.5mm +/- 10%" changed to "0.5 mm ± 10%". | | | |
| Editorial Changes | 2 | FROM: Section/Paragraph xxx | |
| | | TO: Section/Paragraph xxx | |
| | | Justification (If necessary) | |
| Motion | | To approve above editorial change(s) | |
| Motion by/2nd by | | Mike Chang (ITRI)/ Arthur Chen (NTUST) | |
| Discussion | | XXXX | |
| Vote | | 9 Y- 0 N; Motion passed | |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 3

| | | |
|--------------------------|---------------------------------------------------------------------------|------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | |
| | 6.4.1 "post-wafer-thinning" should be "post-thinning wafer thickness". | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. |
| <input type="checkbox"/> | Refer to the TF for more consideration. | |

| | | |
|---------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| | | New Business |
| | X | Editorial Change |
| | Options for editorial change (check one) | X Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | | Case 2: Voted in this section: Original section number and at least one full sentence are required in "FROM" and "TO" fields. |
| | 1 | FROM: Section/Paragraph 6.4.1 "post-wafer-thinning" |
| | | TO: Section/Paragraph 6.4.1 "post-thinning wafer thickness". |
| Justification (If necessary) 6.4.1 "post-wafer-thinning" changed to "post-thinning wafer thickness". | | |
| 2 | FROM: Section/Paragraph xxx | |
| | TO: Section/Paragraph xxx | |
| | Justification (If necessary) | |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) | |
| Discussion | XXXX | |
| Vote | 9 Y- 0 N; Motion passed | |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 4

| | | |
|---------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | |
| | 6.4.1 "that you need" might be removed. | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | | Already addressed by Commenter #, Comment # |
| | | No further action was taken by the TC Chapter. |
| | | Refer to the TF for more consideration. |
| | | New Business |
| | X | Editorial Change |
| | Options for editorial | X Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | | Case 2: Voted in this section: |

| | | |
|------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------|
| | change (check one) | Original section number and at least one full sentence are required in "FROM" and "TO" fields. |
| Editorial Changes | 1 | FROM: Section/Paragraph 6.4.1 "that you need" |
| | | TO: Section/Paragraph 6.4.1 "that you need" was deleted. |
| | | Justification (If necessary) Deleted "that you need". |
| | 2 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) | |
| Discussion | XXXX | |
| Vote | 9 Y- 0 N; Motion passed | |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 5

| | | |
|------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | |
| | 6.4.1 "150µm +/- 10%" should be "150 µm ± 10%". | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. |
| | <input type="checkbox"/> | Refer to the TF for more consideration. |
| | <input type="checkbox"/> | New Business |
| <input checked="" type="checkbox"/> | Editorial Change | |
| Options for editorial change (check one) | X | Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | | Case 2: Voted in this section: Original section number and at least one full sentence are required in "FROM" and "TO" fields. |
| | | |

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|------------------------------|----------------------------------------|----------------------------------------------------------------------------------|
| Editorial Changes | 1 | FROM: Section/Paragraph 6.4.1 “150µm +/- 10%” |
| | | TO: Section/Paragraph 6.4.1 “150 µm ± 10%”. |
| | | Justification (If necessary) 6.4.1 “150µm +/- 10%” changed to “150 µm ± 10%”. |
| | 2 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) | |
| Discussion | XXXX | |
| Vote | 9 Y- 0 N; Motion passed | |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 6

| | | |
|------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | |
| | 6.4.1 “100µm” should be “100 µm”. | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. |
| | <input type="checkbox"/> | Refer to the TF for more consideration. |
| | <input type="checkbox"/> | New Business |
| | <input checked="" type="checkbox"/> | Editorial Change |
| Options for editorial change (check one) | <input checked="" type="checkbox"/> | Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | <input type="checkbox"/> | Case 2: Voted in this section: Original section number and at least one full sentence are required in “FROM” and “TO” fields. |
| | | |
| Editorial | 1 | FROM: Section/Paragraph 6.4.1 “100µm” |
| | | TO: Section/Paragraph 6.4.1 “100 µm”. |

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|------------------------------------|---------------------------------------------------------------------------|
| | Justification (If necessary) 6.4.1 “100µm” changed to “100 µm”. |
| 2 | FROM: Section/Paragraph xxx |
| | TO: Section/Paragraph xxx |
| | Justification (If necessary) |
| Motion | To approve above editorial change(s) |
| Motion by/2nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) |
| Discussion | XXXX |
| Vote | 9 Y- 0 N; Motion passed |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 7

| | | |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | |
| | 6.4.1 “In other words, the wafer edge trimming depth is defined as the thickness of post-wafer-thinning thickness plus 50µm to prevent the chipping issue from happening and also reserve enough margins for the subsequent uniformity control in TSV protrusion and wafer thickness” might be changed to “In other words, the wafer edge trimming depth is set to be d+50 µm so that chipping is prevented and enough margins are reserved for the subsequent uniformity control in TSV protrusion and wafer thickness.” | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. |
| | <input type="checkbox"/> | Refer to the TF for more consideration. |
| | <input type="checkbox"/> | New Business |
| | <input checked="" type="checkbox"/> | Editorial Change |
| | Options for editorial change (check one) | <input checked="" type="checkbox"/> Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | | <input type="checkbox"/> Case 2: Voted in this section: Original section number and at least one full sentence are required in “FROM” and “TO” fields. |
| | | |
| | | |
| Editorial | 1 | FROM: Section/Paragraph 6.4.1 “In other words, the wafer edge trimming depth is defined as the thickness of post-wafer-thinning thickness plus 50µm to prevent the chipping issue from happening and also reserve enough margins for the subsequent uniformity control in TSV protrusion and wafer thickness” |

| | |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>TO: Section/Paragraph 6.4.1 “In other words, the wafer edge trimming depth is set to be d+50 μm so that chipping is prevented and enough margins are reserved for the subsequent uniformity control in TSV protrusion and wafer thickness.”</p> |
| | <p>Justification (If necessary) 6.4.1 “In other words, the wafer edge trimming depth is defined as the thickness of post-wafer-thinning thickness plus 50μm to prevent the chipping issue from happening and also reserve enough margins for the subsequent uniformity control in TSV protrusion and wafer thickness” changed to “In other words, the wafer edge trimming depth is set to be d+50 μm so that chipping is prevented and enough margins are reserved for the subsequent uniformity control in TSV protrusion and wafer thickness.”</p> |
| 2 | <p>FROM: Section/Paragraph xxx</p> |
| | <p>TO: Section/Paragraph xxx</p> |
| | <p>Justification (If necessary)</p> |
| Motion | To approve above editorial change(s) |
| Motion by/2nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) |
| Discussion | XXXX |
| Vote | 9 Y- 0 N; Motion passed |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 8

| | | |
|-------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | |
| | 6.5.1 “therefore” might be removed. | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. |
| | <input type="checkbox"/> | Refer to the TF for more consideration. |
| | <input type="checkbox"/> | New Business |
| | <input checked="" type="checkbox"/> | Editorial Change |
| Options for editorial change (check one) | X | Case 1: No vote in this section: |
| | | To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | X | Case 2: Voted in this section: |
| | | Original section number and at least one full sentence are required in “FROM” and “TO” fields. |

| | | |
|------------------------------|----------------------------------------|------------------------------------------------------------|
| Editorial Changes | 1 | FROM: Section/Paragraph 6.5.1 “therefore” |
| | | TO: Section/Paragraph 6.5.1 “therefore” was deleted. |
| | | Justification (If necessary) 6.5.1 Deleted “therefore”. |
| | 2 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) | |
| Discussion | XXXX | |
| Vote | 9 Y- 0 N; Motion passed | |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 9

| | | | |
|---------|----------------------------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | | |
| | 6.5.1 “Thus cleaning process” might be changed “Therefore, the post-cleaning process”. | | |
| Action | The TC Chapter agreed to do one of the following actions. | | |
| | *No motion is required in this step. | | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # | |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. | |
| | <input type="checkbox"/> | Refer to the TF for more consideration. | |
| | <input type="checkbox"/> | New Business | |
| | <input checked="" type="checkbox"/> | Editorial Change | |
| | Options for editorial change (check one) | <input checked="" type="checkbox"/> | Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | | <input type="checkbox"/> | Case 2: Voted in this section: Original section number and at least one full sentence are required in “FROM” and “TO” fields. |
| | Editorial | 1 | FROM: Section/Paragraph 6.5.1 “Thus cleaning process” |
| | | | TO: Section/Paragraph 6.5.1 “Therefore, the post-cleaning process”. |

| | |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| | Justification (If necessary) 6.5.1 “Thus cleaning process” changed to “Therefore, the post-cleaning process”. |
| 2 | FROM: Section/Paragraph xxx |
| | TO: Section/Paragraph xxx |
| | Justification (If necessary) |
| Motion | To approve above editorial change(s) |
| Motion by/2nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) |
| Discussion | XXXX |
| Vote | 9 Y- 0 N; Motion passed |

Commenter 3 (Gan, Yang / AFF_HIT) - Comment 10

| | | | |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | There are quite a few unclear descriptions as well as grammatical errors. | | |
| | 6.5.1 “Big particles existing on the surface of the bonded wafers, even they are embedded in the adhesive glue, would still cause wafer crack after the wafer thinning process” might be changed to “Big particles exist on the surface of the bonded wafers. Although these particles might be embedded in the adhesive glue, they would still cause wafer crack after the wafer thinning process. | | |
| Action | The TC Chapter agreed to do one of the following actions. | | |
| | *No motion is required in this step. | | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # | |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. | |
| | <input type="checkbox"/> | Refer to the TF for more consideration. | |
| | <input type="checkbox"/> | New Business | |
| | <input checked="" type="checkbox"/> | Editorial Change | |
| | Options for editorial change (check one) | <input checked="" type="checkbox"/> | Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | | <input type="checkbox"/> | Case 2: Voted in this section: |
| | | <input type="checkbox"/> | Original section number and at least one full sentence are required in “FROM” and “TO” fields. |
| | | <input type="checkbox"/> | |
| Editorial | 1 | FROM: Section/Paragraph 6.5.1 “Big particles existing on the surface of the bonded wafers, even they are embedded in the adhesive glue, would still cause wafer crack after the wafer thinning process” | |

| | |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>TO: Section/Paragraph 6.5.1 “Big particles exist on the surface of the bonded wafers. Although these particles embedded in the adhesive glue, they would still cause wafer crack after the wafer thinning process.”</p> |
| | <p>Justification (If necessary) 6.5.1 “Big particles existing on the surface of the bonded wafers, even they are embedded in the adhesive glue, would still cause wafer crack after the wafer thinning process” changed to “Big particles exist on the surface of the bonded wafers. Although these particles embedded in the adhesive glue, they would still cause wafer crack after the wafer thinning process.”</p> |
| 2 | <p>FROM: Section/Paragraph xxx</p> |
| | <p>TO: Section/Paragraph xxx</p> |
| | <p>Justification (If necessary)</p> |
| Motion | To approve above editorial change(s) |
| Motion by/2nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) |
| Discussion | XXXX |
| Vote | 9 Y- 0 N; Motion passed |

Commenter 4 (Vargas Bernal, Rafael / AFF_ Instituto Tecnologico) - Comment 1

| | | |
|----------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | <p>Section 5 terminology is very brief.</p> | |
| | | |
| Action | <p>The TC Chapter agreed to do one of the following actions.</p> | |
| | <p>*No motion is required in this step.</p> | |
| | | <p>Already addressed by Commenter #, Comment #</p> |
| | X | <p>No further action was taken by the TC Chapter.</p> |
| | | <p>Refer to the TF for more consideration.</p> |
| | | <p>New Business</p> |
| | <p>Editorial Change</p> | |
| | <p>Options for editorial change (check one)</p> | <p>Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.</p> |
| | | <p>Case 2: Voted in this section: Original section number and at least one full sentence are required in “FROM” and “TO” fields.</p> |

| | | |
|------------------------------|--------------------------------------|------------------------------|
| Editorial Changes | 1 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| | 2 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Name (Company)/Name (Company) | |
| Discussion | XXXX | |
| Vote | XX Y-XX N; Motion passed/failed. | |



Commenter 4 (Vargas Bernal, Rafael / AFF_ Instituto Tecnológico) - Comment 2

| | | |
|------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | Separate values of units in subsections 6.3.1 and 6.4.1 | |
| | | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. |
| | <input type="checkbox"/> | Refer to the TF for more consideration. |
| | <input type="checkbox"/> | New Business |
| | <input checked="" type="checkbox"/> | Editorial Change |
| Options for editorial change (check one) | <input checked="" type="checkbox"/> | Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | <input type="checkbox"/> | Case 2: Voted in this section: Original section number and at least one full sentence are required in "FROM" and "TO" fields. |
| | | |
| Editorial | 1 | FROM: Section/Paragraph 6.3.1 "0.5mm +/- 10%" |
| | | TO: Section/Paragraph 6.3.1 "0.5 mm ± 10%". |

| | |
|------------------------------------|------------------------------------------------------------------------------------------------|
| | Justification (If necessary) 6.3.1 “0.5mm +/- 10%” changed to “0.5 mm ± 10%”. |
| 2 | FROM: Section/Paragraph 6.4.1 “100µm” |
| | TO: Section/Paragraph 6.4.1 “100 µm”. |
| | Justification (If necessary) 6.4.1 “100µm” changed to 6.4.1 “100 µm”. |
| Motion | To approve above editorial change(s) |
| Motion by/2nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) |
| Discussion | XXXX |
| Vote | 9 Y- 0 N; Motion passed |

Commenter 4 (Vargas Bernal, Rafael / AFF_ Instituto Tecnologico) - Comment 3

| | | |
|-------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comment | In Figure 3 50 um must be changed to micrometers | |
| | | |
| Action | The TC Chapter agreed to do one of the following actions. | |
| | *No motion is required in this step. | |
| | <input type="checkbox"/> | Already addressed by Commenter #, Comment # |
| | <input type="checkbox"/> | No further action was taken by the TC Chapter. |
| | <input type="checkbox"/> | Refer to the TF for more consideration. |
| | <input type="checkbox"/> | New Business |
| | <input checked="" type="checkbox"/> | Editorial Change |
| Options for editorial change (check one) | X | Case 1: No vote in this section: To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V. |
| | | Case 2: Voted in this section: |
| | | Original section number and at least one full sentence are required in “FROM” and “TO” fields. |

| | | |
|------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Editorial Changes | 1 | <p>FROM: Section/Paragraph In Figure 3, 50 μm</p> <p>Trimming depth ((the thickness of post-wafer-thinning (d) + 50μm) +/- 10%)</p>  <p style="text-align: center;">Figure 3 The Wafer Edge Trimming Depth</p> |
| | | <p>TO: Section/Paragraph In Figure 3, 50 μm</p> <p>Trimming depth ((post-thinning wafer thickness (d) + 50 μm) \pm 10 %)</p>  <p style="text-align: center;">Figure 3 The Wafer Edge Trimming Depth</p> |
| | | <p>Justification (If necessary) In Figure 3, 50 μm changed to 3, 50 μm</p> |
| | 2 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| Justification (If necessary) | | |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Mike Chang (ITRI)/ Arthur Chen (NTUST) | |
| Discussion | None | |
| Vote | 9 Y- 0 N; Motion passed | |

Commenter 5 (Martell, Steve / AFF_Sonoscan) - Comment 1

| | |
|---------|------------------------------------------------------------------------------------------------------------------|
| Comment | <p>Perhaps this should be a 'Standard' rather than a 'Guide'? I realize a 'Guide' is easier to get approval.</p> |
| | |
| Action | <p>The TC Chapter agreed to do one of the following actions.</p> |
| | <p>*No motion is required in this step.</p> |
| | <p>Already addressed by Commenter #, Comment #</p> |
| | <p>X No further action was taken by the TC Chapter.</p> |

| | | |
|------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Refer to the TF for more consideration. |
| | | New Business |
| | | Editorial Change |
| | Options for editorial change (check one) | Case 1: No vote in this section: To be included and voted on as a group in § VI. <i>Editorial Changes Other than Those Voted on in § V.</i> |
| | | Case 2: Voted in this section: Original section number and at least one full sentence are required in "FROM" and "TO" fields. |
| | | |
| | | |
| Editorial Changes | 1 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| | 2 | FROM: Section/Paragraph xxx |
| | | TO: Section/Paragraph xxx |
| | | Justification (If necessary) |
| Motion | To approve above editorial change(s) | |
| Motion by/2 nd by | Name (Company)/Name (Company) | |
| Discussion | XXXX | |
| Vote | XX Y-XX N; Motion passed/failed. | |

V-(ii) Comments Created by Handling Negative
None

VI. Editorial Changes Other than Those Voted on in § V
None

VII. Approval Conditions Check

VII. - (i). Approval Rate

APPROVAL CONDITION 1: All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change. (*Regulations* ¶ 9.7.1.2)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations* ¶ 9.7.1.3)

Note: If both approval conditions are not satisfied, the Document fails.

| | | | | | | |
|---------------|---|---------|---|----------------------|---|--------|
| | | Accepts | | (Accepts + Valid) | | |
| Approval Rate | = | 53 | / | 53 | = | 100.0% |
| | | | | | | 90% |

VII. – (ii) Approval Level (check one)

Note: See *Regulations § 9.7.2* for further information.

Globally Approved (No Ratification Ballot needed):

The Letter Ballot meets the Letter Ballot approval conditions for the global technical committee.

Need a Ratification Ballot:

The Letter Ballot meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

VIII. Safety Check

Note: See *Regulations § 15* for further information.

| | | |
|--------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motion | <input checked="" type="checkbox"/> | This is not a Safety Document , when all safety-related information is removed, the Document is still technically sound and complete. (<i>Regulations ¶ 8.7.1</i>) |
| | <input type="checkbox"/> | This is a Safety Document , when all safety-related information is removed, the Document is not technically sound and complete. (<i>Regulations ¶ 8.7.2</i>) |
| | <input type="checkbox"/> | Safety Checklist (<i>Regulations ¶ 15.3</i>) is complete and has been included with the Document throughout the balloting process. (<i>Regulations ¶ 15.1.2</i>) |
| | Motion by/2nd by | March Chang(ITRI)/ Lai-Cheng Kong(MPUGTW) |
| | Discussion | None |
| | Vote | 9Y- 0N; Motion |

IX. Intellectual Property (IP) Check

Note: This Letter Ballot may cover all or part of a Standard or Safety Guideline. This IP check applies to the entire Standard or Safety Guideline. See *Regulations § 16* for further information.

| | | |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <input checked="" type="checkbox"/> | The TC Chapter meeting chair asked those participating, if they were aware of any potentially material patented technology or copyrighted items* in the Standard or Guideline. (<i>Regulations ¶ 8.8.1</i>) | |
| <input type="checkbox"/> | No potentially material patented technology or reproduction of copyrighted items is known. | GO TO SECTION X. |

| | | | |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--|
| | Potentially material patented technology or reproduction of copyrighted items is known, but a Letter of Assurance (LOA) or copyright release letter for such items has been obtained or presented to the TC Chapter. | GO TO SECTION X. | |
| | Potentially material patented technology or reproduction of copyrighted items is known and use of such materials is technically justified by the TC Chapter, but an LOA or copyright release letter for some of the item(s) has NOT been obtained or presented to the TC Chapter. | | |
| Motion | <input type="checkbox"/> | Ask ISC for special permission to publish. | |
| | <input type="checkbox"/> | Quit activity. | |
| | <input type="checkbox"/> | Wait for LOA for patented technology or release of copyrighted items. | |
| Motion by/2nd by | | Name (Company)/Name (Company) | |
| Discussion | | XXXX | |
| Vote | | XX Y-XX N | |
| Final Action | <input type="checkbox"/> | Motion passed | |
| | <input type="checkbox"/> | Motion failed | |

*** Note: Such potentially material patented technology or copyrighted items might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this Letter Ballot.**

X. Action for This Document

| | | | |
|-------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Motion | <input type="checkbox"/> | This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review. | |
| | <input checked="" type="checkbox"/> | This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review. | |
| | <input type="checkbox"/> | This Document passed TC Chapter review with technical changes and with or without editorial changes and will be forwarded to the ISC A&R SC for procedural review. A Ratification Ballot will be issued to verify the technical changes. | |
| | <input type="checkbox"/> | This Document failed TC Chapter review and will be returned to the TF for rework. | |
| | <input type="checkbox"/> | This Document failed TC Chapter review and work will be discontinued. | |
| Motion by/ 2nd by | | March Chang(ITRI)/ Lai-Cheng Kong(MPUGTW) | |
| Discussion | | None | |
| Vote | | 9Y- 0N | |
| Final Action | <input checked="" type="checkbox"/> | Motion passed | |
| | <input type="checkbox"/> | Motion failed | |

Standards staff to record the result of the A&R procedural review here:

| | | |
|----------------|--------------------------|---------------------------------------------------------------|
| A&R | <input type="checkbox"/> | Approved for publication |
| | <input type="checkbox"/> | Approved pending acceptance of the Ratification Ballot |
| | <input type="checkbox"/> | Not approved |
| | Reason: | |