Record of Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: North America
Global Technical Committee: 3DS-IC
TC Chapter Cochairs: Richard Allen/NIST, Chris Moore/Frontier Semiconductor, Sesh Ramaswami/Applied Materials
Standards Staff: Laura Nguyen

	Scheduled in Background Statement	Actual
Date	07/12/2017	07/12/2017
Location	San Francisco, CA	San Francisco, CA
Reason for Change of Date and/or Location (if changed)		

Note: See *Regulations* ¶ 9.5 Exception for allowable reason to change.

I. Document Number and Title

Document Number	Document Title
5822A	New Standard, Specification for Reference Material for Bonded Wafer Stack Void Metrology

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	41	÷	62	=	66.1%	≥60%
Intercommittee Ballot	34					
Voting Interest Reject(s)	0		Total Voters with Rejects			0
Voting Interest Accept(s)	35					

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 (Mashiro Tsuriya/iNEMI) - Comment 1

Comment	1. Void size (nominal+tolerance): Only 100um void size is found in the document which is 0.1um. How about other void size tolerance? If no information, is there any way to prepare the Void metrology study sample?	
Action	**The TC Chapter agreed to do one of the following actions.**	
	***No motion is required in this step.**	
		Already addressed by Commenter #, Comment #
	X	No further action was taken by the TC Chapter.
	X	Refer to the TF for more consideration. TF Response: His comment is correct, in that we only set a tolerance for a single size, which is the reference size of 100 um. The user is then given the option of choosing the tolerances for different size voids. TF agrees that the document needs no changes based on this comment.
		New Business
		Editorial Change

Commenter 1 (Mashiro Tsuriya/iNEMI) - Comment 2

Comment	2. Fig4 Location ID: ID coding is very confusing. It is better to assign the simple address for each void. (example: X from right to left : 1, 2, 3, ... Y axis: from top to bottom: A, B, C, ...)		
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 change **(check one)**		**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 4/4.1** SEMI 3D13 – Guide for Measuring Voids in Bonded Wafer Stacks SEMI AUX032-0715 – Round Robin Study of Method for Measurement of Voids in Bonded Pairs of Silicon Wafers
		TO: Section/Paragraph 4/4.1 SEMI 3D13 – Guide for Measuring Voids in Bonded Wafer Stacks SEMI AUX032-0715 – Round Robin Study of Method for Measurement of Voids in Bonded Pairs of Silicon Wafers SEMI M20 – Practice for Establishing a Wafer Coordinate System
		Justification (If necessary) ID coding is consistent with the approach in SEMI M20, Figure 3a Note that we need SEMI M20 in list of referred standards.

Motion	To approve above editorial change(s)
Motion by/2nd by	Steve Martell (Sonoscan) / Bevan Wu (BW & Associates/ITRI)
Discussion	None
Vote	8 **Y** 0 **N**; Motion passed.

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 Rejects)**				
Approval Rate	=	**35**	/	**35**	=	**100.0%**		**≥90%**

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

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

X	**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		
	X	**This is not a Safety Document**, when all safety-related information is removed, the Document is still technically sound and complete. (*Regulations* ¶ 8.7.1)
		This is a Safety Document, when all safety-related information is removed, the Document is not technically sound and complete. (*Regulations* ¶ 8.7.2)
		Safety Checklist (*Regulations* ¶ 15.3) is complete and has been included with the Document throughout the balloting process. (*Regulations* ¶ 15.1.2)
Motion by/2nd by		Steve Martell (Sonoscan) / Bevan Wu (BW & Associates/ITRI)
Discussion		None
Vote		8 **Y** 0 **N**; Motion passed.

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.

X	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. (*Regulations* ¶ 8.8.1)		
	X	No potentially material patented technology or reproduction of copyrighted items is known.	**GO TO SECTION X.**

*** 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	**X**	This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.

Motion by/ 2nd by		Steve Martell (Sonoscan) / Bevan Wu (BW & Associates/ITRI)
Discussion		None
Vote		7 **Y** 0 **N**
Final Action	**X**	Motion passed
		Motion failed

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

A&R		**Approved for publication**
		Approved pending acceptance of the Ratification Ballot
		Not approved
	Reason:	