3D Packaging and Integration Japan TC Chapter

Meeting Summary and Minutes

Japan Standards Spring Meetings 2024

Thursday, May 23, 2024 14:00 – 16:20 JST

OVTCCM/ SEMI Japan, Tokyo, Japan (Hybrid)

TC Chapter Announcements

Next TC Chapter Meeting

Monday, October 28, 2024 14:00 – 17:00 JST

OVTCCM/ SEMI Japan, Tokyo, Japan (Hybrid)

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: Kazunori Kato (AiT), Masahiro Tsuriya (iNEMI), Haruo Shimamoto (AIST)
SEMI Staff: Akiko Yoshida (SEMI Japan)

Company	*Last*	*First*	*Company*	*Last*	*First*
AIST	*Shimamoto*	*Haruo*	*Nikon*	*Mitsuishi*	*Hajime*
AiT	*Kato*	*Kazunori*	Self	Takahashi	Mark
Corning Japan	*Yamazaki*	*Kuniaki*	*Tazmo*	*Sano*	*Ichiro*
Hitachi Power Solutions	*Ohno*	*Shigeru*	*Yokohama National University*	*Inoue*	*Fumihiro*
iNEMI	*Tsuriya*	*Masahiro*	*Yokohama National University*	*Sano*	*Marie*
Kanagawa Institute of Industrial Science and Technology	*Nemoto*	*Shunsuke*	SEMI Japan	Yoshida	Akiko
KOKUSAI ELECTRIC	*Matsuda*	*Mitsuhiro*			

Table 2 Leadership Changes

WG/TF/SC/TC Name	*Previous Leader*	*New Leader*
None		

Table 3 TC Chapter Structure Changes

Previous WG/TF/SC Name	*New WG/TF/SC Name or Status Change*
None	

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
None		

#1 **Passed** ballots and line items will be submitted to the ISC Audit & Review Subcommittee for procedural review.

#2 **Failed** ballots and line items were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 5 Ratification Ballot Results

Document #	*Document Title*	*ISC A&R Action*	*A&R Forms*
None			

Note 1: **Passed** Ratification ballots will be submitted to SEMI publication for final processing.

Note 2: **Failed** Ratification ballots were returned to the originating task forces for re-work and re-balloting or abandoning.

Table 6 Activities Approved by the GCS between meetings of the TC Chapter

#	*Type*	*SC/TF/WG*	*Details*
7110	Ballot Authorization for Cycle 4	3DP&I Inspection and Metrology TF under NA TC Chapter	Revision to SEMI 3D4-0915 (Reapproved 0222), Guide for Metrology for Measuring Thickness, Total Thickness Variation (TTV), Bow, Warp/Sori, and Flatness of Bonded Wafer Stacks ***– Approved by GCS on 04/12/2024***

Table 7 Authorized Activities

Listing of all revised or new SNARF(s) approved by the Originating TC Chapter.

#	*Type*	*SC/TF/WG*	*Details*
7252	SNARF	3D Packaging & Integration 5-Year Review TF	Reapproval of SEMI 3D19-0619, Test Method for Adhesive Strength of Adhesive Tray Used for Thin Chip Handling
7253	SNARF	3D Packaging & Integration 5-Year Review TF	Reapproval of SEMI G96-1014 (Reapproved 1019), Test Method for Measurement of Chip (Die) Strength by mean of Cantilever Bending

#1 SNARFs and TFOFs are available for review on the SEMI Web site at:
http://downloads.semi.org/web/wstdsbal.nsf/TFOFSNARF

Table 8 Authorized Ballots

#	*When*	*TF*	*Details*
7252	Cycle 6	3D Packaging & Integration 5-Year Review TF	Reapproval of SEMI 3D19-0619, Test Method for Adhesive Strength of Adhesive Tray Used for Thin Chip Handling
7253	Cycle 6	3D Packaging & Integration 5-Year Review TF	Reapproval of SEMI G96-1014 (Reapproved 1019), Test Method for Measurement of Chip (Die) Strength by mean of Cantilever Bending

Table 9 SNARF(s) Granted a One-Year Extension

#	*TF*	*Title*	*Expiration Date*
None			

Table 10 SNARF(s) Cancelled

#	*TF*	*Title*
None		

Table 11 Standard(s) to receive Inactive Status

Standard Designation	*Title*
None	

Table 12 New Action Items

Item #	*Assigned to*	*Details*
3DP&I_20240523-01	SEMI Staff	To send SNARF for New Standard, Guide for 3DS IC bonded layer inspection metrology for 3DP&I GTC members' 2 weeks review.
3DP&I_20240523-02	3DP&I 5-Year Review TF	To submit Doc.#7252 (G96 Reapproval ballot) and Doc.#7253 (3D19 Reapproval ballot) for Cycle 6.
3DP&I_20240523-03	Co-chairs SEMI Staff	To have a discussion regarding a SEMICON Japan program.

Table 13 Previous Meeting Action Items

Item #	*Assigned to*	*Details*
20240126-01	SEMI Staff	to prepare SNARFs for Reapproval documents by next TC Meeting →Closed.
20240126-02	SEMI Staff	to inform the ballot template to the TF leader →Closed

1 Welcome, Reminders, and Introductions

Kazunori Kato (AiT) called the meeting to order at 14:00. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: 01_Required Meeting Elements March 2024_J

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion:	Approve the minutes with two corrections
By / 2nd:	Masahiro Tsuriya (iNEMI)/ Haruo Shimamoto (AIST)
Discussion:	None.
Vote:	9-Y 0-N. Motion passed.

Attachment: 02_20240126_3DPI-Japan_MeetingMinutes_approved

3 Liaison Reports

3.1 *Japan Regional Standards Committee (JRSC)*

Akiko Yoshida (SEMI Japan) reported for the JRSC. At the previous meeting held on April 9, the JRSC recommended that GoToMeeting, which has been used for many years as an official web conferencing system for audio and visual content for the Japan TC Chapter meetings, be replaced by Microsoft Teams due to recent connection problems.

3.2 *Global Coordinating Subcommittee (GCS)*

Akiko Yoshida (SEMI Japan) reported for the GCS that Doc.#7110, Revision to SEMI 3D4-0915 (Reapproved 0222), Guide for Metrology for Measuring Thickness, Total Thickness Variation (TTV), Bow, Warp/Sori, and Flatness of Bonded Wafer Stacks was authorized to be submitted for Cycle 4 by the GCS on April 12, 2024.

3.3 *3D Packaging and Integration North America TC Chapter*

Akiko Yoshida (SEMI Japan) reported for the 3D Packaging and Integration North America TC Chapter. Of note:

- The next TC Chapter meeting was supposed to be held during SEMICON West, but it has not been confirmed yet.
- Doc.#7110, Revision to SEMI 3D4-0915 (Reapproved 0222), Guide for Metrology for Measuring Thickness, Total Thickness Variation (TTV), Bow, Warp/Sori, and Flatness of Bonded Wafer Stacks was authorized to be submitted for Cycle 4 by the GCS on April 12, 2024.

Attachment: 03_NA 3DP&I Liaison Report Nov2023 v2

3.4 *3D Packaging and Integration Taiwan TC Chapter*

Akiko Yoshida (SEMI Japan) reported for the 3D Packaging and Integration Taiwan TC Chapter. Of note:

- Taiwan TC Chapter meeting has not been held for a long period of time.
- The next meeting is TBD.

Attachment: 04_3D P&I TW Liaison Report_20220902_v1

4 SEMI Staff Report

Akiko Yoshida (SEMI Japan) gave the SEMI Staff Report. Of note:

- New online voting system went live for Cycle 3, 2024. This integrates and streamlines sign-in process with various SEMI/Standards member services, and improves data management for SEMI internal database. It is also expected to bring updated user interface while maintaining functionality that's familiar to voters.
- SEMI Standards Regulations and Procedure Manual were updated in February 2024. They are available at www.semi.org/standards (under Tools for Developing Standards).
- TFs have one year from 02/20/24 to implement use of Connect@SEMI (https://connect.semi.org) for TF management and document development depository. Once TFs have implemented use of Connect@SEMI, they shall use it to: maintain the TF member roster up to date, share the working drafts in PDF, and distribute the Draft Document at least one week before ballot submission to SEMI.
- Meeting Required Elements have been updated to include notice on confidential information.

Attachment: 05_Staff Report March 2024 v4.2

5 Ballot Review

None.

6 Subcommittee and Task Force Reports

6.1 *3DS IC Bonded Layer Inspection Metrology Task Force*

Shigeru Ohno (Hitachi Power Solutions) reported for the 3DS IC Bonded Layer Inspection Metrology Task Force. The Task Force met on May 13 and drafted "Guide" for detecting defects on the interfaces between layers of 3D stacked IC. He also presented the draft SNARF. The SNARF will be sent to the 3D Packaging and Integration Global Technical Committee members for two weeks review.

Attachment: 06_Activity Report_3DSIC-InspectionTF_20240513

07_SNARF_April2024_3DSIC.asd_R1

6.2 *Wafer Bond Strength Measurement by Double-cantilever Beam Task Force*

Fumihiko Inoue (Yokohama National University) reported for the Wafer Bond Strength Measurement by Double-cantilever Beam Task Force. The kickoff meeting was held on May 16 and over 20 members attended. In the meeting, overview of the SEMI Standards Program and objectives of the Task Force were explained, and the expected timeline of the document development was shared. The next Task Force meeting will be held at the end of July where the very first draft document will be presented. The Task Force will also call for participants from device makers as well as global participants like Leti and IMEC.

Attachment: 08_SEMI Packaging Standards Activities 202405_Kickoff_v1.0

6.3 *3D Packaging & Integration 5-Year Review Task Force*

Please see 7.2 for the details.

6.4 *3D Packaging & Integration Steering Group*

Kazunori Kato (AiT) reported for the Steering Group that there had been no activities.

7 Old Business

7.1 *Project Period Review*

None.

7.2 *Project Period Review*

Masahiro Tsuriya (iNEMI) submitted the SNARFs for Reapproval of SEMI 3D19 and SEMI G9.

Motion: Approve SNARF for Reapproval of SEMI 3D19-0619, Test Method for Adhesive Strength of Adhesive Tray Used for Thin Chip Handling
By / 2nd: Masahiro Tsuriya (iNEMI)/ Haruo Shimamoto (AIST)/
Discussion: None.
Vote: 8-Y 0-N. Motion Passed.

Motion: Approve SNARF for Reapproval of SEMI G96-1014 (Reapproved 1019), Test Method for Measurement of Chip (Die) Strength by mean of Cantilever Bending
By / 2nd: Masahiro Tsuriya (iNEMI)/ Haruo Shimamoto (AIST)/
Discussion: None.
Vote: 7-Y 0-N. Motion Passed.

Masahiro Tsuriya (iNEMI) also proposed ballot submissions of Reapproval of SEMI 3D19 and SEMI G9.

Motion: Authorize the letter ballot submission for Reapproval of SEMI 3D19-0619, Test Method for Adhesive Strength of Adhesive Tray Used for Thin Chip Handling in Cycle 6.
By / 2nd: Masahiro Tsuriya (iNEMI)/ Haruo Shimamoto (AIST)/
Discussion: None.
Vote: 7-Y 0-N. Motion Passed.

Motion: Authorize the letter ballot submission for Reapproval of SEMI G96-1014 (Reapproved 1019), Test Method for Measurement of Chip (Die) Strength by mean of Cantilever Bending in Cycle 6.
By / 2nd: Masahiro Tsuriya (iNEMI)/ Haruo Shimamoto (AIST)/
Discussion: None.
Vote: 7-Y 0-N. Motion Passed.

Attachment: 09_SNARF_April2024_Reapproval of 3D19_R0

10_SNARF_April2024_Reapproval of G96_R0

8 New Business

8.1 *Program at SEMICON Japan 2024*

Kazunori Kato (AiT) told that the 3D Packaging and Integration Japan TC Chapter would like to plan a program to be held during SEMICON Japan 2024, however, due to limited time, the meeting would be setup and details would be discussed with the Co-chairs and SEMI staff in July.

9 Action Item Review

9.1 *Open Action Items*

Item #	*Assigned to*	*Details*
20240126-01	SEMI Staff	to prepare SNARFs for Reapproval documents by next TC Meeting. →Closed.
20240126-02	SEMI Staff	to inform the ballot template to the TF leader. →Closed.

9.2 *New Action Items*

Item #	*Assigned to*	*Details*
3DP&I_20240523-01	SEMI Staff	To send SNARF for New Standard, Guide for 3DS IC bonded layer inspection metrology for 3DP&I GTC members' 2 weeks review.
3DP&I_20240523-02	3DP&I 5-Year Review TF	To submit Doc.#7252 (G96 Reapproval ballot) and Doc.#7253 (3D19 Reapproval ballot) for Cycle 6.
3DP&I_20240523-03	Co-chairs SEMI Staff	To have a discussion regarding a SEMICON Japan program.

10 Next Meeting and Adjournment

The next meeting is scheduled for Monday, October 28, 2024 14:00-17:00 (JST) via OVTCCM and at SEMI Japan Office, Tokyo, Japan (Hybrid). See http://www.semi.org/standards-events for the current list of events.

Adjournment: [16:20].

Respectfully submitted by:

Akiko Yoshida

Standards & EHS, SEMI Japan

Phone: +81-3-3222-5863

Email: ayoshida@semi.org

Minutes tentatively approved by:

Kazunori Kato (AiT), Co-chair	June 18, 2024
Masahiro Tsuriya (iNEMI), Co-chair	June 20, 2024
Haruo Shimamoto (AIST), Co-chair	June 19, 2024

Table 14 Index of Available Attachments#1

Title	*Title*
01_Required Meeting Elements March 2024_J	06_Activity Report_3DSIC-InspectionTF_20240513
02_20240126_3DPI-Japan_MeetingMinutes_approved	07_SNARF_April2024_3DSIC.asd_R1
03_NA 3DP&I Liaison Report Nov2023 v2	08_SEMI Packaging Standards Activities 202405_Kickoff_v1.0
04_3D P&I TW Liaison Report_20220902_v1	09_SNARF_April2024_Reapproval of 3D19_R0
05_Staff Report March 2024 v4.2	10_SNARF_April2024_Reapproval of G96_R0

#1 Due to file size and delivery issues, attachments must be downloaded separately. A .zip file containing all attachments for these minutes is available at www.semi.org. For additional information or to obtain individual attachments, please contact Akiko Yoshidaat the contact information above.