Global Silicon Wafer Japan TC Chapter

Meeting Summary and Minutes

Japan Standards-Winter 2022 Meetings

Friday, January 28, 2022, 10:00 –12:00[JST]

Official Virtual TC Chapter Meeting

TC Chapter Announcements

Next TC Chapter Meeting

Friday, April 22, 2022, 10:00-12:00noon [JST]

Official Virtual TC Chapter Meeting

Table 1 Meeting Attendees

Italics indicate virtual participants

Co-Chairs: Name (Company) Tetsuya Nakai (SUMCO), Ryuji Takeda (Global Wafers Japan)
SEMI Staff: Mami Nakajo

Company	*Last*	*First*	*Company*	*Last*	*First*
SELF	*Kawai*	*Naoyuki*	*SUMCO*	*Nakai*	*Tetsuya*
Wafer Information Service	*Yoshise*	*Masanori*	*Hitachi High-Tech Corporation*	*Oka*	*Kenji*
Global Wafers Japan	*Takeda*	*Ryuji*	*SEMI Japan*	*Nakajo*	*Mami*

Table 2 Leadership Changes

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

Table 3 Committee 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*
6853	Reapproval of SEMI MF978-1106 (Reapproved 0317) Test Method for Characterizing Semiconductor Deep Levels by Transient Capacitance Techniques	**Passed**, as balloted
6854	Reapproval of SEMI MF928-0317, Test Method for Edge Contour of Circular Semiconductor Wafers and Rigid Disk Substrates	**Passed**, as balloted
6855	Reapproval of SEMI MF728-1106 (Reapproved 0317)Practice for Preparing an Optical Microscope for Dimensional Measurements	**Passed**, as balloted
6856	Reapproval of SEMI MF673-0317, Test Method for Measuring Resistivity of Semiconductor Wafers or Sheet Resistance of Semiconductor Films with a Noncontact Eddy-Current Gauge	**Passed**, as balloted

Table 4 Ballot Results

Document #	*Document Title*	*Committee Action*
6857	Reapproval of SEMI MF28-0317, Test Method for Minority Carrier Lifetime in Bulk Germanium and Silicon by Measurement of Photoconductivity Deca	**Passed**, as balloted

#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 Activities Approved by the GCS between meetings of the TC Chapter

#	*Type*	*SC/TF/WG*	*Details*
None			

No activity requested by the Japan TC Chapter between meetings.
The NA TC Chapter requested for transferring the ballot reviews of 6363,6613,5981 and 6526B at the Japan TC Chapter meeting on Nov. 26,2020 and the GCS approved them.

Table 6 Authorized Activities

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

#	*Type*	*SC/TF/WG*	*Details*
None			

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

Table 7 Authorized Ballots

#	*When*	*TF*	*Details*
6570	Cycle03/04-2022	International Test Methods Task Force	New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique

Table 8 SNARF(s) Granted a One-Year Extension

#	*TF*	*Title*	*Expiration Date*
5772	Japan Test Method Task Force	Revision of MF391-0310: Test Methods for Minority Carrier Diffusion Length in Extrinsic Semiconductors by Measurement of Steady-state Surface photovoltage	2023/09/11
6570	International Test Methods Task Force	New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique	2023/04/19

Table 9 SNARF(s) Abolished

#	*TF*	*Title*
None		

Table 10 Standard(s) to receive Inactive Status

Standard Designation	*Title*
None	

Table 11 New Action Items

Item #	*Assigned to*	*Details*
20220128-01	SEMI Staff	To send all passed ballots to A&R
20220128-02	International Test Methods Task Force	To prepare the ballot submission of Document#6570: New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique in Cycle 03/04-2022
20220128-01	SEMI Staff	To prepare a SNARF proposal for Reapproval to SEMI M70-1015 at NA Spring Meeting.

Table 12 Previous Meeting Action Items

Item #	*Assigned to*	*Details*
None		

1 Welcome, Reminders, and Introductions

Tetsuya Nakai (SUMCO), called the meeting to order at 10:00. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: 01-02_Required Element Nov 2020 Rev1_E+J_r1

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion:	Approve the previous meeting minutes of the Silicon Wafer Japan TC Chapter on January 15, 2021 as written
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Attachment: 02-01_20210825_Global Silicon Wafer Japan TC Chapter Meeting Minutes approved

3 Ballot Review

NOTE 1: TC Chapter adjudication on ballots reviewed is detailed in the Audits & Review (A&R) Subcommittee Forms for procedural review. The A&R forms are available as attachments to these minutes. The attachment number for each balloted document is provided under each ballot review section below.

3.1 Cycle 7-2021 submitted by the NA TC Chapter (the GCS authorized to transfer responsibilities for Letter Ballot review from the NA TC Chapter to the Japan Chapter of Silicon Wafer Committee for these documents)

3.1.1 Doc6853, Reapproval of SEMI MF978-1106 (Reapproved 0317) Test Method for Characterizing Semiconductor Deep Levels by Transient Capacitance Techniques

Motion:	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)

By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Attachment: 6853 A&R_final

3.1.2 Doc6854, Reapproval of SEMI MF928-0317, Test Method for Edge Contour of Circular Semiconductor Wafers and Rigid Disk Substrates

Motion:	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)
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Attachment: 6854 A&R_final

3.1.3 Doc6855, Reapproval of SEMI MF728-1106 (Reapproved 0317)Practice for Preparing an Optical Microscope for Dimensional Measurements

Motion:	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)
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Attachment: 6855 A&R_final

3.1.4 Doc6856, Reapproval of SEMI MF673-0317, Test Method for Measuring Resistivity of Semiconductor Wafers or Sheet Resistance of Semiconductor Films with a Noncontact Eddy-Current Gauge

Motion:	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)
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Attachment: 6856 A&R_final

3.1.5 Doc6857, Reapproval of SEMI MF28-0317, Test Method for Minority Carrier Lifetime in Bulk Germanium and Silicon by Measurement of Photoconductivity Deca

Motion:	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)
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Motion:	This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

Attachment: 6857 A&R_final

Action Item: 20220128-01(SEMI Staff) To send all passed ballots to A&R

4 Subcommittee and Task Force Reports

4.1 *International Advanced Wafer Geometry Task Force*

Masanori Yoshise (Wafer Information Service) reported for the International Advanced Wafer Geometry Task Force as follows.

Action Item: None,

Attachment: 04-01_AWG JPN Winter 20220126 minutes DRAFT

4.2 International/Japan Test Method Task Force

Ryuji Takeda (Global Wafers Japan) reported for the Japan Test Method Task Force.

Action Item: 20220128-02 To prepare the ballot submission of Document#6570: New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique in Cycle 03/04-2022

Attachment: 04-02_Test Method TF Meeting_2022.1.21 minuite

The following documents are still on the "5-year Review Check" list and Ryuji Takeda (Global Wafers Japan) reported the status in the Task Force report.

- M51-1012: Test Method for Characterizing Silicon Wafer by Gate Oxide Integrity
- M60-1014: Test Method for Time Dependent Dielectric Breakdown Characteristics of SiO2 Films for Si Wafer Evaluation

4.3 International Advanced Automated Surface Inspection Task Force

No special topic was reported at this meeting.

4.4 *International Polished Wafers Task Force*

No special topic was reported at this meeting.

4.5 International Epitaxial Wafers Task Force

No special topic was reported at this meeting.

4.6 International Annealed Wafers Task Force

No special topic was reported at this meeting.

4.7 International SOI Wafers Task Force

Tetsuya Nakai (SUMCO), reported that the TF has worked for 5 year review of SEMI M41: Specification of Silicon-on-Insulator (SOI) for Power Device/ICs

4.8 International Terminology Task Force

No special topic was reported at this meeting.

4.9 JA Shipping Box TF

No special topic was reported at this meeting.

5 Liaison Reports

5.1 *Silicon Wafer Europe TC Chapter*

5.2 *Silicon Wafer North America TC Chapter*

there had not been meetings since last year due to COVID. The latest reports have been reported in the previous meetings. Will have more information after Spring 2022.

5.3 *GCS*

Tetsuya Nakai (SUMCO) reported for the GCS that there is no update.

6 SEMI Staff Report

Mami Nakajo (SEMI) gave the SEMI Staff Report.

Attachment: 06-01_Staff Report Dec 2021 v3_N

7 Old Business

7.1 Project Period Review

The following SNARFs are active and granted a one-year extension.

7.1.1 #6570 SNARF for: New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique

- By International Test Methods Task Force
- Expiration Date: 2023/04/19

Motion:	Approve a one-year extension of the project period for the SNARF
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	3 in favor and 0 opposed. **Motion passed.**

Ryuji Takeda (Global Wafers Japan) addressed the committee on this topic.

Motion:	To approve ballot submission of: Document #6570 New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique to Cycle 03/4 -2022
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion Passed.**

7.1.2 #5772 SNARF for: Revision of MF391-0310: Test Methods for Minority Carrier Diffusion Length in Extrinsic Semiconductors by Measurement of Steady-state Surface photovoltage

- By Japan Test Method Task Force
- Expiration Date: 2023/09/11

Motion:	Approve a one-year extension of the project period for the SNARF
By / 2nd:	Ryuji Takeda (Global Wafers Japan) / Naoyuki Kawai (Self)
Discussion:	None
Vote:	4 in favor and 0 opposed. **Motion passed.**

7.2 5 Year Review Check

7.2.1 SEMI M51-1012: Test Method for Characterizing Silicon Wafer by Gate Oxide Integrity

7.2.2 SEMI M60-1014: Test Method for Time Dependent Dielectric Breakdown Characteristics of SiO2 Films for Si Wafer Evaluation

These documents are still on the "5-year Review Check" list and Japan Test Method TF are still working.

Ryuji Takeda (Global Wafers Japan) reported them in the Japan Test Method Task Force report. (See 4.2)

7.2.3 SEMI M70-1015: Test Method for Determining Wafer-Near-Edge Geometry Using Partial Wafer Site Flatness

Masanori Yoshise (Wafer Information Service) reported that International Advanced Wafer Geometry TF reviewed and agreed to reapproval process at Spring NA.

Action Item:20220128-01(SEMI Staff) To prepare a SNARF proposal for Reapproval to SEMI M70-1015 at NA Spring Meeting.

8 New Business

8.1 Proposal of New Activity

8.1.1 #6570 SNARF for: New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique

(See 7.1.1)

9 Action Item Review

9.1 Open Action Item

None

9.2 New Action Item

Item #	*Assigned to*	*Details*
20220128-01	SEMI Staff	To send all passed ballots to A&R
20220128-02	International Test Methods Task Force	To prepare the ballot submission of Document#6570: New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique in Cycle 03/04-2022

10 Next Meeting and Adjournment

The next meeting is scheduled for Friday April 22 ,2022 10:00-12:00 noon [JST] OVTCCM.

See http://www.semi.org/standards-events for the current list of events.

Adjournment: [12:00]>.

Respectfully submitted by:

Mami Nakajo

Coordinator

SEMI Japan

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Email: mnakajo@semi.org

Minutes tentatively approved by:

Tetsuya Nakai (SUMCO), Co-chair	February 16, 2022
Ryuji Takeda (Global Wafers Japan), Co-chair	February 25, 2022

Table 13 Index of Available Attachments#1

Title	*Title*
01-02_Required Element Nov 2020 Rev1_E+J_r1	06-01_Staff Report Dec 2021 v3_N
02-01_20210825_Global Silicon Wafer Japan TC Chapter Meeting Minutes_approved	
04-01_AWG JPN Winter 20220126 minutes DRAFT	
04-02_Test Method TF Meeting_2022.1.21 minuite	

#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 [SEMI Staff Name] at the contact information above.