Silicon Wafer NA TC Chapter
Meeting Summary and Minutes

SEMICON West
Tuesday, July 09, 2024
9:00 AM – 12:00 PM
Moscone Center, San Francisco, CA

TC Chapter Announcements

Next TC Chapter Meeting
Tuesday, February 25, 2025, SEMI HQ, Milpitas, CA in conjunction with NA Winter Meetings. Check www.semi.org/en/standards for the latest update.

Table 1 Meeting Attendees

Co-Chairs: Noel Poduje (SMS), Dinesh Gupta (STA)
SEMI Staff: Kevin Nguyen (SEMI HQ)

Company	*Last*	*First*	*Company*	*Last*	*First*
ASML	*Daware*	*Ajinkya*	*Siltronic*	*Passek*	*Fritz*
STA	**Gupta**	**Dinesh**	**SOITEC**	**Pfeiffer**	**Gerd**
KLA	**Haller**	**Kurt**	*SMS*	*Poduje*	*Noel*
Canon Nanotechnologies	*Jones*	*Chris*	*Siltronic*	*Riedel*	*Frank*
Acteon	**Komatsu**	**Shoji**	*Okmetic*	*Santala*	*Petri*
Kobe Steel, Ltd.	**Morimoto**	**Tsutomu**	*GlobalWafers*	*Takeda*	*Ryuji*
SUMCO	**Nakai**	**Tetsuya**	*Self*	*Wagner*	*Peter*

Italic indicates remote participant. Bold indicates in person participant.

Table 2 Leadership Changes

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

Table 3 Ballot Results

Document #	*Document Title*	*Committee Action*
7024	Line Item Revision to SEMI M1-0918, Specification for Polished Single Crystal Silicon Wafers	
	Line Item 1 - (Change the 300 diameter tolerance from ±0.2 mm to ±0.1mm)	Passed as balloted
7163	Reapproval of SEMI MF1530-0707 (Reapproved 1018): Test Method for Measuring Flatness, Thickness, and Total Thickness Variation on Silicon Wafers by Automated Noncontact Scanning	Passed as balloted
7223	Reapproval of SEMI M35-1114 (Reapproved 1019) Guide for Developing Specifications for Silicon Wafer Surface Features Detected by Automated Inspection	Failed and returned to TF for rework
7224	Reapproval of SEMI MF1528-0413 (Reapproved 1018) Test Method for Measuring Boron Contamination in Heavily Doped N-Type Silicon Substrates by Secondary Ion Mass Spectrometry	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 4 Ratification Ballot Results

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

Table 5 Activities Approved by the GCS between meetings of the TC Chapter

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

Table 6 Authorized Activities

#	*Type*	*SC/TF/WG*	*Details*
7192	SNARF	Int'l AWG TF	Revision of SEMI M73-1013E (Reapproved 1019) Test Method for Extracting Relevant Characteristics from Measured Wafer Edge Profiles (SNARF was revised to include additional edge method)
7261	SNARF	Int'l ASI TF	Reapproval of SEMI M53-0220 Practice for Calibrating Scanning Surface Inspection Systems Using Certified Depositions of Monodispere Reference Spheres on Unpatterned Semiconductor Wafer Surfaces
7262	SNARF	Int'l ASI TF	Reapproval of SEMI M58-1109 (Reapproved 0320) Test Method for Evaluating DMA Based Particle Deposition Systems and Processes
7263	SNARF	Int'l ASI TF	Line Item Revision of SEMI M35-1114 (Reapproved 1019) Guide for Developing Specifications for Silicon Wafer Surface Features Detected by Automated Inspection
7264	SNARF	Int'l ASI TF	Line Item Revision of SEMI M52-0923 - Guide for Specifying Scanning Surface Inspection Systems for Silicon Wafers for the 130 nm to 5 nm Technology Generations
7265	SNARF	Int'l Test Methods TF	Reapproval of SEMI MF391-0310E Test Method for Minority Carrier Diffusion Length in Extrinsic Semiconductors by Measurement of Steady-State Surface Photovoltage
7266	SNARF	Int'l SOI TF	Reapproval of SEMI M71-0120 Specification for Silicon-on-Insulator (SOI) Wafers for CMOS LSI

NOTE 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*	*SC/TF/WG*	*Details*
7261	Cycle 6 or 7 - 2024	Int'l ASI TF	Reapproval of SEMI M53-0220 Practice for Calibrating Scanning Surface Inspection Systems Using Certified Depositions of Monodispere Reference Spheres on Unpatterned Semiconductor Wafer Surfaces
7262	Cycle 6 or 7 - 2024	Int'l ASI TF	Reapproval of SEMI M58-1109 (Reapproved 0320)Test Method for Evaluating DMA Based Particle Deposition Systems and Processes
7263	Cycle 6 or 7 - 2024	Int'l ASI TF	Line Item Revision of SEMI M35-1114 (Reapproved 1019) Guide for Developing Specifications for Silicon Wafer Surface Features Detected by Automated Inspection
7264	Cycle 6 or 7 - 2024	Int'l ASI TF	Line Item Revision of SEMI M52-0923 - Guide for Specifying Scanning Surface Inspection Systems for Silicon Wafers for the 130 nm to 5 nm Technology Generations
7265	Cycle 6, 7, 8 - 2024	Int'l Test Methods TF	Reapproval of SEMI MF391-0310E Test Method for Minority Carrier Diffusion Length in Extrinsic Semiconductors by Measurement of Steady-State Surface Photovoltage
7266	Cycle 6, 7, 8 - 2024	Int'l SOI TF	Reapproval of SEMI M71-0120 Specification for Silicon-on-Insulator (SOI) Wafers for CMOS LSI

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

#	TF	Title	Expiration Date
6583	Int'l SOI TF	New Standard: Specification for SOI Wafers for RF Device Applications	July 9, 2025

Table 9 SNARF(s) Cancelled

#	TF	Title
None		

Table 10 Standard(s) to receive Inactive Status

Standard Designation	Title
None	

Table 11 New Action Items

Item #	Assigned to	Details
None		

Table 12 Previous Meeting Action Items

Item #	Assigned to	Details	Status
July2023-#1	Ajinkya Daware (ASML), Dinesh Gupta (STA), and Kevin Nguyen (SEMI)	To work on the survey for Revision of SEMI M1 (Subject: 300 mm wafer diameter changing tolerance ±200 um to ±100 um)	Completed

1 Welcome, Reminders, and Introductions

1.1 Dinesh Gupta called the meeting to order at 9:00 AM. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves. Noel requested staff to investigate ways for members to introducing themselves since there are people in person as well as online.

2 Review of Previous Meeting Minutes

2.1 The TC Chapter reviewed the minutes of the previous meeting.

Motion: Accept the minutes as written.
By / 2nd: By: Kurt Haller / KLA-Tencor
Second: Tetsuya Nakai / SUMCO Corporation
Discussion: None
Vote: 7-0

3 Review of Schedule for the next meeting (Winter Meetings, February 2025)

3.1 Draft schedule is attached.

Attachment: Suggested Schedule SiWfr 0225

4 Liaison Reports

4.1 *Europe TC Chapter*

4.1.1 Fritz Passek reported. Of notes

- Last meeting
  - November 16, 2023
- Next meeting
  - SEMICON Europa, November 2024
  - Check www.semi.org/standards for the latest update
- Leadership changes
  - Int'l Test Methods TF
    - Peter Wagner (Self) steps down
    - Thomas Hager (Siltronic) – New leader
  - Int'l Terminology TF
    - Peter Wagner (Self) steps down
    - No leader is identified.
- New SNARFs
  - 7162, New Standard: Test Method for epi-resistivity determination in Si wafers by Surface Charge Profiling
- Authorized ballots
  - Doc. 7024, Line Item Revision to SEMI M1-0918 Specification for Polished Single Crystal Silicon Wafers (Diameter tolerance reduction for 300 mm wafers)
- Int‘l Advanced Wafer Geometry TF
  - Ballot Development
    - 6983, Revision for SEMI M49, Guide for Specifying Geometry Measurement Systems for Silicon Wafers for the 130 nm to 16 nm Technology Generation
  - New Business
    - SNARF: Revision of SEMI M73-1013E (Reapproved 1019): Test Method for Extracting Relevant Characteristics from Measured Wafer Edge Profiles to include new metrics characterizing Edge Roundness
    - Frank Riedel presented the draft of the SNARF.
    - SNARF will be issued once the patent referred to is published.
- Int‘l Automated Advanced Surface Inspection TF
  - New Business
    - Status of AFM Roughness Working Group Activities
      - WG leader Judith Wittmann (Siltronic AG) compiled the current status
    - Status of Haze Working Group Activities
      - WG leader Kurt Haller (KLA) gave a verbal summary on the current status
- Int‘l Polished Wafer TF
  - Ballot Development

- Doc #7024 - Line Item Revision to SEMI M1-0918 Specification for Polished Single Crystal Silicon Wafers (Diameter tolerance for 300 mm wafers)
  - Result of industry-wide survey on reducing current 300 mm tolerance specification
    - 24 responses: a clear majority in favor of 300.00 ± 0.1 mm mainly due to capability reasons

- Int'l Test Methods TF
  - SEMI Working Group – Phase Out of Mercury
    - A generic project plan was generated and is updated in each meeting.
    - Focus will be on SCP (Surface Charge Profiling) method as a first step.
    - Drafting doc. 7162, New Standard: Test Method for epi-resistivity determination in Si wafers by Surface Charge Profiling
  - A New Metric for Wafer Flatness: Edge Roundness
    - Current parameters for specifying wafer edge shape according to SEMI M73 do not address the transition region between inner surface of wafer and its edge.

Attachment: EU Si Wafer TC Chapter Liaison Report Dec 2023 v1

4.2 *Japan TC Chapter*

4.2.1 Nakai-san reported for the Japan TC Chapter.

- Last meeting
  - Friday, April 26, 2024
  - OVTCCM
- Next meeting
  - Thursday, August 29,
  - OVTCCM/ SEMI Japan, Tokyo, Japan (Hybrid)
- SNARF Cancelled
  - 5772, Revision of MF391-0310: Test Methods for Minority Carrier Diffusion Length in Extrinsic Semiconductors by Measurement of Steady-state Surface Photovoltage
- Japan Test Method Task Force
  - Drafting Doc.#6570B, New Standard: Guide for Measuring Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by a Laser-Scatter Tomography Technique
  - Revision work of M85-0120, Guide for the Measurement of Trace Metal Contamination on Silicon Wafer Surface by Inductively Coupled Plasma Mass Spectrometry started in May.
- New Business
  - Deletion of 450mm description from SEMI M1 and 450mm related standards

No.	Standard Title	Task Force

SEMI M1	Specification for Polished Single Crystal Silicon Wafers	Int'l Polished Wafer TF (Hirofumi Okano: GWJ)
SEMI M49	Guide for Specifying Geometry Measurement Systems for Silicon Wafers for the 130 nm to 16 nm Technology Generations	Int'l Advanced Wafer Geometry TF (Masanori Yoshise: self)
SEMI M52	Guide for Specifying Scanning Surface Inspection Systems for Silicon Wafers for the 130 nm to 5 nm Technology Generations	Int'l Automated Advanced Surface Inspection TF (Kurt Haller: KLA)
SEMI M62	Specification for Silicon Epitaxial Wafers	Int'l Epitaxial Wafer TF (Hitoshi Tsunoda: SEH)
SEMI M73	Test Method for Extracting Relevant Characteristics from Measured Wafer Edge Profiles	Int'l Advanced Wafer Geometry TF (Frank Riedel: Siltronic)

Attachment: JA SiW_Liaison Report_July 2024_R0

5 SEMI Staff Report

5.1 Kevin Nguyen (SEMI) gave the SEMI Staff Report. Of note:

- SEMI upcoming event
- SEMICON West 2025-2030
  - 2025—October 7-9 | Phoenix Convention Center | Phoenix, AZ
  - 2026—October 13-15 | Moscone Center | San Francisco, CA
  - 2027—October 12-14 | Phoenix Convention Center | Phoenix, AZ
  - 2028—October 10-12 | Moscone Center | San Francisco, CA
  - 2029—October 9-11 | Phoenix Convention Center | Phoenix, AZ
  - 2030—October 29-31 | Moscone Center | San Francisco, CA
- Upcoming NA 2025 Meetings

NA Standards Winter Meetings	Feb 24-27, 2025 *[Tentative]* SEMI HQ, Milpitas, California/USA
NA Standards Summer Meetings	June 2-6, 2025 *[Tentative]* SEMI HQ, Milpitas, California/USA
SEMICON West	Oct 6-9, 2025 Phoenix Convention Center Phoenix, Arizona/USA

  -

- 2024 & 2025 Critical Dates for SEMI Standards Ballots
  - https://www.semi.org/en/collaborate/standards/ballots
- The Use of Connect@SEMI for TF Management and Document Development Depository
  - Refer to PM § 6.4.5 Operation of TFs
    - Task Forces have until 02/20/25 to implement use of Connect@SEMI. (https://connect.semi.org)
    - 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.
        - The default format for working Draft Document sharing shall be Adobe Acrobat PDF.
      - Distribute the Draft Document at least one week before ballot submission to SEMI.
    - All existing TFs have been set up in Connect@SEMI as Communities with the TF leaders assigned community admin and moderator capabilities
    - Training materials for TF leaders and members (users) are available at
      - https://www.semi.org/standards
        - Under Standards Developer Resources □ Collaboration Tools (scroll to the bottom)
- Productive Committee Member Guidelines
  - SEMI standards development is built on the work of volunteers and Standards staff.
    - Be considerate of everyone's time and effort
  - Please make an honest effort to provide constructive feedback on ballots during the review period
    - It is considerably less work for everyone to edit a ballot prior to voting than to adjudicate and rework the ballot
    - Do not intentionally delay providing feedback until the voting period
  - Please vote on time
    - Do not wait for last-minute voting reminders or skip voting cycles
    - When submitting negatives be technically clear and persuasive; refer to specific sections or paragraphs
    - Clearly identify negatives only for technical/procedural errors (refer to Regulations ¶ 9.1.10, Procedure Manual ¶ 2.9.3.2.1) and comments for grammatical/editorial errors.
- SEMIViews 4.0 – Coming Soon!
  - New or improved features include:
    - Improved search functionality and navigation panel
    - New custom Library feature
    - User defined shortcuts using Collections, Favorites, and Bookmarks
    - Improvements for account admin functions
    - A more dynamic landing page with feeds on new & revised Standards, upcoming meetings & events as well as help & resource center
    - Refreshed user interface
  - In progress
    - Incorporating feedback from customer/user beta testing
    - Beta testing with select SEMIViews account admins
    - New SEMIViews platform planned for launch on August 5, 2024.
- SEMI Standards Publications
  - Total SEMI Standards in portfolio: 1,088

- Includes 342 Inactive Standards

Attachment: Staff Report July 2024 v5

6 Regulations Change Report (if applicable)

6.1 No new update.

7 Ballot Review

7.1 Doc. 7024, Line Item Revision to SEMI M1-0918, Specification for Polished Single Crystal Silicon Wafers (Change the 300 diameter tolerance from ±0.2 mm to ±0.1mm)

7.1.1 Ajinkya Daware (ASML) presented the justification for ballot 7024 as a background. Refer to attachment below.

Attachment: SEMI_wafer_diameter_tolerance_explanation

7.1.2 Passed as balloted. Refer to attachment for details.

7.2 Doc. 7163, Reapproval of SEMI MF1530-0707 (Reapproved 1018): Test Method for Measuring Flatness, Thickness, and Total Thickness Variation on Silicon Wafers by Automated Noncontact Scanning

7.2.1 Passed as balloted. Refer to attachment for details.

7.3 Doc. 7223, Reapproval of SEMI M35-1114 (Reapproved 1019) Guide for Developing Specifications for Silicon Wafer Surface Features Detected by Automated Inspection

7.3.1 Failed TC Chapter review. Refer to attachment for details.

7.4 Doc. 7224, Reapproval of SEMI MF1528-0413 (Reapproved 1018) Test Method for Measuring Boron Contamination in Heavily Doped N-Type Silicon Substrates by Secondary Ion Mass Spectrometry

7.4.1 Passed as balloted. Refer to attachment for details.

Attachment: 7024_BallotReview

Attachment: 7163_BallotReview

Attachment: 7223_BallotReview

Attachment: 7224_BallotReview

8 Task Force Reports

8.1 *Int'l Advanced Wafer Geometry Task Force /Noel Poduje (SMS)*

8.1.1 Noel reported. Of note:

- Ballot Review
  - None
- Ballot development
  - 1) 7192 - Revision of SEMI M73-1013 TEST METHOD FOR EXTRACTING RELEVANT CHARACTERISTICS FROM MEASURED WAFER EDGE PROFILES

- Fritz presented a revised SNARF incorporating the additional method proposed by Higashi (SUMCO). It will be presented to the TC tomorrow for approval. A ballot with both methods will be developed.).
- The SNARF was revised.
    - Motion: Approve the revised M73 SNARF
      By: Fritz Passek /Siltronic
      Second: Tetsuya Nakai /SUMCO
      Discussion:
      Result: 8-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority

- 2) 6983A - Revision of SEMI M49-0918 With Title Change To: Guide for Specifying Geometry Measurement Systems for Silicon Wafers for the 130 nm to 3 nm Technology Generations
    - Yoshi led a discussion of the latest draft of the M49 revision beginning with a ppt (See Attachment). He described various changes to M49, many of which are presumably agreed upon. His proposal includes reference wafer values and therefore performance requirements for 11 – 3nm TGs the same as for 16nm (no further scaling).

- Old Business
    - Advanced 200mm wafer requirements
        - Dave Kallus (KLA) said that there is new interest in 200mm wafer Nanotopography for the 130 – 90 nm TGs. This is apparently driven by wafer bonding and packaging. Dave was encouraged to present more specifics at a future meeting.

Attachment: AWG NA West 2024

8.2 *Int'l Automated Advanced Surface Inspection Task Force/ Kurt Haller (KLA-Tencor)*

8.2.1 Kurt reported. Of note:

- Ballot Review
    - The reapproval ballot for M35 failed due to it's use of the word shall in a Guide. Expunging the offending words seemed like a minor editorial change; nonetheless SEMI Staff advised balloting was necessary. Kurt presented both a SNARF and a single line-item Ballot.
        - Motion: Approve the SNARF for M35
          By: Kurt Haller / KLA-Tencor
          Second: Peter Wagner / Peter Wagner
          Discussion:
          Result: 8-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority
        - Motion: Authorize the M35 for Letter Ballot for review at SEMICON Europa
          By: Kurt Haller / KLA-Tencor
          Second: Gerd Pfeiffer / Soitec
          Discussion:
          Result: 9-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority

- Ballot Development/Reports
    - M52-0923--LSE clarification; eliminate 450 mm wafer references
        - Motion: Approve the SNARF for M52
          By: Kurt Haller / KLA-Tencor
          Second: Gerd Pfeiffer / Soitec
          Discussion:
          Result: 7-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority

- Motion: Authorize the M52 for Letter Ballot for review at SEMICON Europa
  By: Kurt Haller / KLA-Tencor
  Second: Gerd Pfeiffer / Soitec
  Discussion:
  Result: 7-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority

- AFM Working Group.
  - The WG, led by Judith Wittmann, continued to meet monthly in CY2024. Kurt gave a quick overview of the wafer set assembled from three participating wafer manufacturers and the measurements to be taken by them and four equipment makers. The wafers were shipped to GW's facility in South Korea on 3 July and were delivered on 8 July.

- New business
  - Five-year reviews come due next year for SEMI M53-0220 and M58-1109 (Reapproved 0320). The TF agreed that simple reapproval ballots should be initiated by SEMI Staff for both documents.
    - Motion: Authorize the M53 and M58 for Reapproval Ballots for review at SEMICON Europa
      By: Kurt Haller / KLA-Tencor
      Second: Tetsuya Nakai / SUMCO Corporation
      Discussion:
    - Result: 8-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority

Attachment: ASI SEMI_West_2024

8.3 *Int'l SOI Wafers TF/Gerd Pfeiffer (SOITEC)*

8.3.1 Gerd presented. Of note:

- The TF is still working on doc. 6583, New Standard: Specification for SOI Wafers for RF Device Applications., for wafer diameter of 200 and 300 mm.
- SEMI M71-0120 - Specification for Silicon-on-Insulator (SOI) Wafers for CMOS LSI, is due for 5 year. The TF would like to issue for reaproval ballot.
  - Motion: Authorize M71-0120 - Specification for Silicon-on-Insulator (SOI) Wafers for CMOS LSI, for reapproval ballot for review at SEMICON JAPAN
    By: Gerd Pfeiffer / Soitec
    Second: Tetsuya Nakai / SUMCO Corporation
    Discussion:
    Result: 10-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority
- Doc. 6583, New Standard: Specification for SOI Wafers for RF Device Applications, is expiring.
  - Motion: Approve a 1 year extension of the project period for the SNARF
    New Standard for SOI Wafers for RF Applications (SNARF 6583)
    By: Gerd Pfeiffer / Soitec
    Second: Kurt Haller / KLA-Tencor
    Discussion:
    Result: 9-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority

Attachment: Intl SOI TF Meeting 070824

8.4 *Int'l Polished Wafer TF/TBD*

8.4.1 Dinesh reported. Of note:

- Doc. 7024, Line Item Revision to SEMI M1-0918, Specification for Polished Single Crystal Silicon Wafers (Change the 300 diameter tolerance from ±0.2 mm to ±0.1mm)
    - Passed TC Chapter review.

8.5 *Int'l Test Methods TF/ Dinesh Gupta (STA)*

8.5.1 Dinesh reported. Of note:

- SEMI MF391-0310E Test Method for Minority Carrier Diffusion Length in Extrinsic Semiconductors by Measurement of Steady-State Surface Photovoltage, is due for 5 year review.
    - Motion: Authorize MF391 for reapproval ballot for review at SEMICON Japan
      By: Kurt Haller / KLA-Tencor
      Second: TETSUYA NAKAI / SUMCO Corporation
      Discussion:
      Result: 9-Y 0-N Voting Result: Pass - 100.00%. Voting Rule: Majority

9 Old Business

9.1 None

10 New Business

10.1 5 Year Review.

10.1.1 5-Year Review Standards are handled by various Task Forces.

10.1.2 SEMI M62-0317 Specification for Silicon Epitaxial Wafers, is due for 5 year. Dinesh Gupta requested to be on hold as he is coordinating with Japan Task Force.

11 Next Meeting and Adjournment

11.1 The next meeting is scheduled for NA Winter Meeting, February 25 in Milpitas, CA. Refer http://www.semi.org/standards for the current list of meeting schedules.

11.2 Noel Poduje expressed sincere appreciation for international participation despite the odd time zone for some. Having no further business, a motion was made to adjourn. Adjournment was at 11:00 AM.

Respectfully submitted by:

Kevin Nguyen,
SEMI Standards Operations Manager
Phone: 408-943-7997
Email: knguyen@semi.org

Minutes approved by:

Dinesh Gupta (STA)	<Date approved>
Noel Poduje (SMS)	<Date approved>

Table 13 Index of Available Attachments#1

Title	*Title*
Suggested Schedule SiWfr 0225	7163_BallotReview
EU Si Wafer TC Chapter Liaison Report Dec 2023 v1	7223_BallotReview
JA SiW_Liaison Report_July 2024_R0	7224_BallotReview
Staff Report July 2024 v5	AWG NA West 2024
SEMI_wafer_diameter_tolerance_explanation	ASI SEMI_West_2024
7024_BallotReview	Intl SOI TF Meeting 070824

#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.