



MEMS/NEMS North America TC Chapter

Meeting Summary and Minutes

SEMICON West NA Standards Meetings 2025

Monday, October 6, 13:00–14:30 Mountain

Phoenix Convention Center, Phoenix, Arizona/USA, and via Official Virtual TC Chapter Meeting (OVTCCM)

TC Chapter Announcements

Next TC Chapter Meeting

SEMI Standards NA Winter Meetings 2026

February 23-26 (*tentative*)

Online via OVTCCM

Table 1 Meeting Attendees

Co-Chairs: Michelle Bourke (Lam Research), Steve Martell (Nordson SONOSCAN)

SEMI Staff: Laura Nguyen

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
<i>A.M. Fitzgerald & Associates, LLC</i>	<i>Fitzgerald</i>	<i>Alissa M.</i>	<i>Teledyne Micralyne Inc</i>	<i>Harrison</i>	<i>Tyler</i>
<i>Camenzind Solutions</i>	<i>Camenzind</i>	<i>Mark</i>			
Lam Research	Bourke	Michelle	SEMI	Nguyen	Laura

Table 2 Leadership Changes

None

Table 3 Committee Structure Changes

None

Table 4 Ballot Results

None

Table 5 Ratification Ballot Results

None

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

None

Table 7 Authorized Activities

None



Table 8 Authorized Ballots

None

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

None

Table 10 SNARF(s) Canceled

None

Table 11 Standard(s) to receive Inactive Status

None

Table 12 New Action Items

None

Table 13 Previous Meeting Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
2021Dec#01	Steve Martell	Provide Laura N. a list of MEMS/Sensors conferences/symposium to potentially present a MSIG WGs and SEMI Standards Update. Ongoing.
2024Nov#01	SEMI, MSIG	How to increase participants in SEMI Standards, WGs, WG meeting, and to other events? Ongoing.
2025Feb#01	SEMI/Chairs	Review existing MEMS TFs with MSIG (plan to disband, rename, and change leadership) Ongoing.

1 Welcome, Reminders, and Introductions

Michelle Bourke (Lam Research), called the meeting to order at 13:08 Pacific. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: SEMI Standards Required Elements

2 Review of Previous Meeting Minutes

The TC Chapter reviewed the minutes of the previous meeting.

Motion: To accept the previous meeting minutes as written.

By / 2nd: By: Tyler Harrison / Teledyne MEMS
Second: Alissa Fitzgerald / A.M. Fitzgerald & Associates, LLC

Discussion: None.

Vote: 3-0 in favor. Motion passed.

Attachment: [2025Summer] MEMS NEMS NA TC Chapter Meeting Minutes FINAL



3 Liaison Reports

3.1 SEMI Staff Report

SEMI Global 2025 & 2026 Calendar of Events

- SEMICON Europa (Nov 18-21; Munich, Germany)
- SEMICON Japan (December 17-19; Tokyo, Japan)
- SEMICON Korea (Feb 11-13; Seoul, Korea)
- SEMICON China (March 25-27; Shanghai, China)
- SEMICON Southeast Asia (May 5-7, 2026; Kuala Lumpur, Malaysia)

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

Global Standards Summit (GSS) 2025 @ SEMICON West

- Date/Time: Tuesday, October 7 | 1:30 PM to 5:30 PM | North Building, 200 Level, Room 229A
- Theme: Future Standards for Connected & Sustainable Semiconductor Manufacturing
- Session Description: The Global Standards Summit is a strategic forum dedicated to identifying standards-critical areas and advancing an industry-wide standardization roadmap for the next 3- and 7-year horizons. Building on the momentum of the inaugural Summit—which spotlighted essential topics such as environmental sustainability—this year’s gathering continues that dialogue while expanding focus to include emerging challenges like supply chain traceability.
- With increasing fragmentation across the global microelectronics supply chain driven by geopolitical and other disruptive forces, the need for unified standards is more critical than ever. This Summit provides a timely opportunity to convene, collaborate, and identify the standards that will address these challenges and foster greater industry alignment. We encourage you to join, engage, and help shape the future of standards.
- <https://www.semiconwest.org/programs/global-standards-summit>

Workshops @ SEMICON West 2025

- SEMI Liquid Chemicals Analytical Workshop
 - Description: Focusing on recent advances in analytical methodology and instrumentation
 - Wednesday, October 8, 09:00-11:30 (North Bldg | Room 229B)
- Enhancing Voltage Sag Immunity: SEMI F47 Standard Updates & Insights
 - Description: Delivering practical recommendations to enhance the SEMI F47 standard and increase tool resilience in future designs, with a focus on power quality conditions, equipment susceptibility, testing approaches, and mitigation strategies.
 - Wednesday, October 8, 14:30-16:30 (North Bldg | Room 229B)
- Semiconductor Device Manufacturing in a Cleanroom (Best Practices to Improve Product Reliability and Yield) [SEMIU]
 - Description: Provides the fundamentals and thought processes to improve your production reliability & yield.
 - Thursday, October 9, 8:00 AM - 4:00 PM (North Bldg | 200 Level)

Upcoming NA Meetings 2025 (Proposed)



- NA Standards Winter Meetings: Feb 23-26, 2026 (tentative), at SEMI HQ, Milpitas, California/USA
- NA Spring Meetings (in conjunction with ASMC): May 11-14, 2026, Hilton Albany, New York
 - {refer to attachment for additional information on ASMC}
- SEMICON West Meeting: Oct 12-15, 2026, at Moscone Center, San Francisco, CA/USA

2025 Critical Dates for SEMI Standards Ballots

- Cycle 8-2025: Ballot Submission Due: Sept 3/Voting Period: Sept 24 – Oct 24
- Cycle 9-2025: Ballot Submission Due: Oct 14/Voting Period: Oct 29 – Nov 28

2026 Critical Dates for SEMI Standards Ballots (Tentative)

- Cycle 1-2026: Ballot Submission Due: Dec 16/Voting Period: Jan 7 – Feb 6
- Cycle 2-2026: Ballot Submission Due: Jan 23/Voting Period: Feb 11 – Mar 13
- Cycle 3-2026: Ballot Submission Due: Mar 5/Voting Period: Mar 18 – Apr 17
- Cycle 4-2026: Ballot Submission Due: Mar 30/Voting Period: Apr 14 – May 14
- Cycle 5-2026: Ballot Submission Due: May 8/Voting Period: May 27 – June 26

<https://www.semi.org/en/collaborate/standards/ballots>

Standards Publications Report

<i>Cycle</i>	<i>New</i>	<i>Revised</i>	<i>Reapproved</i>	<i>Withdrawn</i>
May 2025	0	5	4	0
June 2025	1	0	0	0
July 2025	1	4	0	0
August 2025	0	1	0	0
September 2025	4	1	3	0

Total in portfolio – 1,107 (includes 373 Inactive Standards)

New Standards

<i>Cycle</i>	<i>Designation</i>	<i>Title</i>	<i>Committee</i>	<i>Region</i>
June 2025	SEMI M94	Specification for Silicon Carbide Engineered Substrates	Compound Semiconductor Materials	EU
July 2025	SEMI E194	Guide to Using a Liquid Particle Counter to Assess Particulate Surface Contamination on Critical Chamber Components and Coupons	Metrics	NA
September 2025	SEMI E195	Test Method Using Adhesive Replacement Substrates to Assess Particulate Surface Contamination on Critical Chamber Components	Metrics	NA
September 2025	SEMI E196	Guide for Equipment Edge Data Governance	Information & Control	TW
September 2025	SEMI M95	Test Method for Net Carrier Density and Resistivity of Silicon Epitaxial Layer by Capacitance-Voltage Measurements with an Evaporated Metal Schottky Diode	Silicon Wafer	JP
September 2025	SEMI T26	Specification for Electronic Supply Chain Traceability Using Distributed Ledger Technology	Traceability	NA

Educational Courses under Development

- {EDA} Everything You Need to Know about the SEMI Equipment Data Acquisition (EDA) Standards Suite
 - Objective: Introduce EDA standards, best practices for implementation, and addresses concerns about adoption through example use cases
 - Course Date: November 20, 2025, in conjunction with SEMICON Europa
 - Status: Confirmed, under development
- {Subfab} Intro to Sub-fab Course



- **Objective:** Gain a comprehensive understanding of SubFAB operations, including system components, facility layouts, environmental and sustainability considerations, organizational structure, safety and maintenance best practices, and incident-response preparedness within the semiconductor manufacturing ecosystem.
- **Course Date:** Early 2026 (2 sessions, EU & Asia friendly)
- **Status:** Under development
- Other courses being considered: SECS/GEM, Seals, Cybersecurity
- *Interested in shaping future educational courses with us? Please reach out to SEMI staff.*

Regulations & Procedure Manual

- Regulations (Feb 20, 2024): <https://www.semi.org/sites/semi.org/files/2024-02/Standards%20Regulations%20February%2020%202024.pdf>
- Procedure Manual (July 7, 2025)
 - <https://www.semi.org/sites/semi.org/files/2025-07/Procedure%20Manual%20July%2007%202025%20v1.pdf>
 - Noticeable updates:
 - Major revision to multiple Standards
 - New SNARF Form (July 2025)
 - Ballot checklist requirement for Revision to Primary Standard

Five-Year Review

- None

Staff Contact: Laura Nguyen, Lnguyen@semi.org

Attachment: Staff Report Oct 2025 v4_MEMS

4 Ballot Review

None

5 Subcommittee and Task Force Reports

The following task forces are currently inactive:

- Packaging TF
- Terminology TF
- Wafer Bond TF

5.1 Joint MSIG (Manufacturing WG), MEMS Reliability, MEMS Substrate, and MEMS Material Characterization Task Force

This Task Force reviewed standards for the upcoming Five-Year Review at the last meeting and decided to submit a Reapproval Ballot for SEMI MS13-0221, *Guide for Use of Test Patterns for Characterizing a Deep Reactive Ion Etching (DRIE) Process*, in Cycle 9, 2025 or 1, 2026.

5.2 Joint MSIG (Device WG), MEMS and Miniaturized Gas Sensing Task Force

There is no update at this time.

5.3 MEMS Microfluidics Task Force

There is no update at this time.

6 Old Business

6.1 Previous Action Items

- Review existing MEMS TFs with MSIG (plan to disband, rename, and change leadership)
 - Ongoing
- SEMI, MSIG; How to increase participants in SEMI Standards, WGs, WG meeting, and to other events?
 - Social media posts, MSEC ??
 - Incentives to join?

7 New Business

7.1 Continued Discussion

A survey was completed by MSIG asking for top topics to work on. The top three are as follows:

- MEMS processing tutorials
- Heterogeneous integration
- White paper on diagnosing tests and reliability failures
- **Newly added:** Integration of new materials into fab

8 Action Item Review

8.1 New Action Items are noted in Table 11. Previous action items are noted in Table 12 in 'red' and for recent updates in 'blue'. There is no further business.

9 Next Meeting and Adjournment

9.1 The SEMI Standards NA Winter Meetings 2026 are tentatively scheduled for the week of February 23-26, 2026, to be held virtually via OVTCCM. Schedule details TBD. <https://www.semi.org/en/products-services/standards>.

Tentative Schedule:

- Monday, February 23
 - 13:00-14:30, MEMS/NEMS NA TC Chapter

Adjournment: 14:00.

Respectfully submitted by:

Laura Nguyen

Sr. Coordinator, International Standards

SEMI Global Headquarters

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Email: lnguyen@semi.org



Minutes tentatively approved by:

Michelle Bourke (Lam Research), Co-chair	<Date approved>
Steve Martell (Nordson SONOSCAN), Co-chair	<Date approved>

Minutes approved by: **MEMS/NEMS NA OVTCCM on February 9, 2026.**

Table 14 Index of Available Attachments#1

<i>Title</i>	<i>Title</i>
SEMI Standards Required Elements	Staff Report Oct 2025 v4_MEMS
[2025Summer] MEMS NEMS NA TC Chapter Meeting Minutes	

#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 Laura Nguyen at the contact information above.