

SEMI Staff Report

March 2022

v3

SEMI Global 2022 Calendar of Events



Event Name	Event Details
SEMICON[®] CHINA	June 15-17 Shanghai, China
SEMICON[®] SOUTHEAST ASIA	June 21-23 Penang, Malaysia
SEMICON[®] WEST	July 12-14 San Francisco, CA
SEMICON[®] TAIWAN	Sept 14-16 Taipei, Taiwan
SEMICON[®] EUROPA	Nov 15-18 Munich, Germany
SEMICON[®] JAPAN	Dec 14- 16 Tokyo, Japan

Standards Meetings This Week



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	28	29	30	31	1	
	EH&S					Schedule at-a-glance
	Facilities & Gases					
	Information & Control					
	Liquid Chemicals					
		Physical Interfaces & Carriers				
	Silicon Wafer					
	NARSC					

Standards Networking Event



Tuesday, March 29
5:00 PM to 6:30 PM
The Valley

Upcoming NA Meetings



Event Name	Date / Venue
SEMICON West	July 10-14, 2022 San Francisco, California
NA Standards Fall Meetings	Nov 7-10, 2022 <i>(Tentative)</i> SEMI HQ in Milpitas, California

Critical Dates for SEMI Standards Ballots



2022	Ballot Submission Deadline	Voting Opens	Voting Closes
Cycle 3	March 9	March 23	April 22
Cycle 4	April 19	May 3	June 2
Cycle 5	May 18	June 1	July 1
Cycle 6	July 26	August 9	September 8
Cycle 7	August 30	September 13	October 13
Cycle 8	October 4	October 18	November 17
Cycle 9	November 15	November 29	December 29

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

Style Manual update



- Style Manual (November 1, 2021)
 - New Appendix 5
 - Table A5-1 Restricted Biased Terms with Approved, Alternative, Bias-Free Terms

<i>Restricted Biased Terms</i>	<i>Approved, Alternative, Bias-free Terms</i>
blacklist	blocklist, denylist, droplist
master	primary, main, leader, active
slave	secondary, replica, follower, standby
webmaster	web product owner
whitelist	allowlist, accesslist, permitlist

- Table A5-2 Biased Terms to Avoid with Approved, Alternative, Bias-Free Terms

https://www.semi.org/sites/semi.org/files/2021-11/Style%20Manual%20Version%208_November%201%2C%202021_final.pdf

Ballot Formatting

- For revision to an existing Standard, make sure to use the current published version.
 - Obtain the current MS Word version from staff
 - Highly recommend to turn on revision tracking when editing
 - Discourage to manually strikethrough for deletion or underline for addition.
 - If the track changes are excessive and the ballot becomes hard to follow, recommendation to revise as a “major rewrite.”
 - “Major rewrites” does not show track changes. Instead, a notice is included in the Background Statement and at the top of the ballot that states “This Document is a complete rewrite.”
- For Line-Item ballots, clearly show what changes are proposed in each Line Item and include an explanation for each Line Item in the required background statement (*Procedure Manual* ¶3.5.3.1).

SEMI Standards Publications



- Total SEMI Standards in portfolio: **1,056**
 - Includes 297 Inactive Standards

Cycle	New	Revised	Reapproved	Withdrawn
August 2021	4	3	0	0
September 2021	0	5	6	0
October 2021	1	2	3	1
November 2021	3	7	7	1

SEMI Standards Publications



- New Standards

Cycle	Designation	Title	Committee	Locale
August 2021	SEMI A4.1	Specification for the Automated Test Equipment Tester Event Messaging for Semiconductors (TEMS)	Automated Test Equipment	NA
August 2021	SEMI D82	Test Method for Viewing Angle of Flat Panel Displays	FPD – Metrology	KO
August 2021	SEMI F116	Guide for Drain Segregation for Semiconductor Manufacturing Tools to Support Site Water Reuse	Liquid Chemicals	NA
August 2021	SEMI M90	Test Method for Bulk Micro Defect Density and Denuded Zone Width in Annealed Silicon Wafers by Optical Microscopy After Preferential Etching	Silicon Wafer	JA

SEMI Standards Publications



- New Standards cont.

Cycle	Designation	Title	Committee	Locale
October 2021	SEMI C103	Guide for Reporting Performance Parameters of the Chemical Mechanical Planarization (CMP) Conditioning Disks Used in Semiconductor Manufacturing	Liquid Chemicals	NA
November 2021	SEMI E183	Specification for Rich Interactive Test Database (RITdb)	Automated Test Equipment	NA
November 2021	SEMI E186	Specification for Location and Dimensions for Power Connectors and EtherCAT ports in Mass Flow Controllers and Mass Flow Meters	Gases	NA
November 2021	SEMI D74	Guide for Measuring Dimensions of Plastic Films/Substrates	FPD - Materials & Components	JA

SEMI Standards Publications



- Inactive Standards (as of November 30, 2021)

Committee	Number of Inactive Standards
Assembly & Packaging	68
Automated Test Equipment	2
Compound Semiconductor Materials	4
Environmental Health & Safety	8
Facilities	14
FPD – Equipment	5
FPD – Factory Automation	14
FPD – Materials & Components	13
Gases	18

SEMI Standards Publications



- Inactive Standards (as of November 30, 2021) Cont.

Committee	Number of Inactive Standards
Information & Control	37
Liquid Chemicals	26
MEMS	4
Metrics	12
Micropatterning	30
Photovoltaic	3
Physical Interfaces & Carriers	25
Silicon Wafer	12
Traceability	8

Facilities: Ongoing

- SEMI E51, Guide for Typical Facilities Services and Termination Matrix
 - RA ballot failed TCC review; SNARF abolished Fall 2017; **Action needed to either send to Inactive Status or issue new SNARF to reflect change in scope**
 - Searching for volunteers to lead this activity
- SEMI F47, Specification for Semiconductor Processing Equipment Voltage Sag Immunity
 - Reapproval ballot failed TCC review; Spring 2018 – SNARF expired; SNARF abolished Fall 2019
 - Voltage Sag Immunity TF will take over this activity
- SEMI E76, Guide for 300 mm Process Equipment Points of Connection to Facility Services
 - RA ballot failed TCC review; Summer 2021 – **Action needed to either send to Inactive Status or Abolish RA SNARF 6773 and reissue new SNARF**
 - Searching for volunteers to lead this activity
- SEMI E6, Guide for Semiconductor Equipment Installation Documentation
 - RA ballot failed TCC review; Summer 2021 – **Action needed to either send to Inactive Status or Abolish RA SNARF 6771 and reissue new SNARF**
 - Searching for volunteers to lead this activity

Facilities 5-Year Review

Designation #	Standard Title	Action By	Assigned to
SEMI F51-0917	Guide for Elastometric Sealing Technology	Sept 2022	F51 Revision TF

Open SNARFs



- Facilities

- 6628: New Standard, Guide for Facilities Data Package for Semiconductor Manufacturing Equipment Installation and Building Information Modeling

- Gases

- 6394: Line-Item Revision to SEMI F74-1103 (Reapproved 0710), Test Method for the Performance and Evaluation of Metal Seal Designs for Use in Gas Delivery Systems
 - SNARF extension expires Spring 2022; Action Needed
- 6510: Line-Item Revision to SEMI F32-0211, Test Method for Determining of Flow Coefficient for High Purity Shutoff Valves
 - SNARF expires Spring 2022; Action Needed
- 6612: New Subordinate Standard: Test Method for the Determination of Conductance of Fluid Handling Components at Subatmospheric and Vacuum Pressure, to SEMI F32-0211, Test Method for Determination of Flow Coefficient for High Purity Shutoff Valves
 - SNARF expires 10/21/2022

Gases: Ongoing



- Reapproval Ballots below failed TC Chapter Review; Summer 2021
- **Action needed to either send to Inactive Status or Abolish RA SNARFs and reissue new SNARFs**
 - 6813: SEMI F28-1103 (Reapproved 0815), Test Method for Measuring Particle Generation from Process Panels
 - 6814: SEMI F43-0308 (Reapproved 0613), Test Method for Determination of Particle Contribution by Point-of-Use Gas Purifiers and Gas Filters
 - 6815: SEMI F59-0302 (Reapproved 0613), Test Method for Determination of Filter or Gas System Flow Pressure Drop Curves
 - 6816: SEMI F67-1101 (Reapproved 0713), Test Method for Determining Inert Gas Purifier Capacity
 - 6817: SEMI F68-1101 (Reapproved 0713), Test Method for Determining Purifier Efficiency

Gases 5-Year Review [1/5]

Designation #	Standard Title	Action By	Assigned to
SEMI C14-95 (Reapproved 0913)	Test Method for Particle Shedding Performance of 25 cm Gas Filter Cartridges	Past due	Filters & Purifiers TF
SEMI F36-0299 (Reapproved 0913)	Guide for Dimensions and Connections of Gas Distribution Components	Past due	Filters & Purifiers TF
SEMI F19-0815	Specification for the Surface Condition of the Wetted Surfaces of Stainless Steel Components	Past due	Materials TF
SEMI F21-1016	Classification of Airborne Molecular Contaminant Levels in Clean Environments	Past due	Filters & Purifiers TF
SEMI F62-1016	Test Method for Determining Mass Flow Controller Performance Characteristics for Ambient and Gas Temperature Effects	Past due	Mass Flow Controller TF

Gases 5-Year Review [2/5]

Designation #	Standard Title	Action By	Assigned to
SEMI C54-1116	Specification for Oxygen	Past due	Gases Specification TF
SEMI C70-1116	Specification for Tungsten Hexafluoride	Past due	Gases Specification TF
SEMI C58-1116	Specification for Hydrogen	Past due	Gases Specification TF
SEMI C56-1116	Specification for Dichlorosilane	Past due	Gases Specification TF
SEMI F113-1116	Test Method for Pressure Transducers Used in Gas Delivery Systems	Past due	Pressure Measurements TF

Gases 5-Year Review [3/5]

Designation #	Standard Title	Action By	Assigned to
SEMI C60-0317	Specification for Nitrous Oxide	March 2022	Gases Specification TF
SEMI C59-0317	Specification for Nitrogen	March 2022	Gases Specification TF
SEMI C57-0317	Specification for Argon	March 2022	Gases Specification TF
SEMI C3-0317	Specification for Gases	March 2022	Gases Specification TF
SEMI E56-0317	Test Method for Determining Accuracy, Linearity, Repeatability, Short-Term Reproducibility, Hysteresis, and Deadband of Thermal Mass Flow Controllers	March 2022	Mass Flow Controller TF
SEMI E29-1110 (Reapproved 0417)	Terminology for the Calibration of Mass Flow Controllers and Mass Flow Meters	April 2022	Mass Flow Controller TF

Gases 5-Year Review [4/5]

Designation #	Standard Title	Action By	Assigned to
SEMI F30-0517	Test Method for Verification of Purifier Performance Testing for Trace Gas Impurities and Particles at an Installation Site	May 2022	Filters & Purifiers TF
SEMI F29-0997 (Reapproved 0517)	Test Method for Purge Efficacy of Gas Source System Panels	May 2022	Filters & Purifiers TF
SEMI E66-0611 (Reapproved 0517)	Test Method for Determining Particle Contribution by Mass Flow Controllers	May 2022	Mass Flow Controller TF
SEMI E16-0517	Guide for Determining and Describing Mass Flow Controller Leak Rates	May 2022	Mass Flow Controller TF
SEMI F20-0706E (Reapproved 0917)	Specification for 316L Stainless Steel Bar, Forgings, Extruded Shapes, Plate, and Tubing for Components Used in General Purpose, High Purity and Ultra-High Purity Semiconductor Manufacturing Applications	September 2022	Materials TF

Gases 5-Year Review [5/5]

Designation #	Standard Title	Action By	Assigned to
SEMI F81-0611 (Reapproved 0917)	Specification for Visual Inspection and Acceptance of Gas Tungsten Arc (GTA) Welds in Fluid Distribution Systems in Semiconductor Manufacturing Applications	September 2022	Materials TF
SEMI F78-0611 (Reapproved 0917)	Practice for Gas Tungsten Arc (GTA) Welding of Fluid Distribution Systems in Semiconductor Manufacturing Applications	September 2022	Materials TF
SEMI F69-1213E ("E" approved 10/2017)	Test Method for Transport and Shock Testing of Gas Delivery Systems	October 2022	Materials TF
SEMI E27-1017	Guide for Mass Flow Controller and Mass Flow Meter Linearity	October 2022	Mass Flow Controller TF
SEMI E18-1017	Guide for Temperature Specifications of the Mass Flow Controller	October 2022	Mass Flow Controller TF
SEMI F24-1217	Specification for Particle Concentration of Grade 10/0.2 Inert Specialty Gases	December 2022	Gases Specification TF



Thank You