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Standards are numbered sequentially as they are developed and approved in accordance with the formal balloting requirements. The last two or four digits of the document designation denote the year or the month and year when the latest revisions were made. Revised sections of existing documents are noted by a side-bar in the column beside the text.

NOTICE: Starting with the November 2001 (1101) publishing cycle, a distinction is being made between Standards that have subordinate document designation numbers and require a parent Standard (i.e., SEMI E1.1, which requires SEMI E1) and Standards that have subordinate document designation numbers but do not require a parent Standard (i.e., SEMI E1.9). Documents that require parent Standards are now indented under their parent Standards. Documents that do not require parent Standards are not indented, and are now available individually.

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SEMI F64-0701 (Reapproved 0307)

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SEMI F76-0303 (Reapproved 1110)

Test Method for Evaluation of Particle Contribution from Gas System Components Exposed to Corrosive Gas

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Specification for Dimension of Compact Size Mass Flow Controllers and Mass Flow Meters for 1.5 Inch Type Surface Mount Gas Distribution Systems

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SEMI S2-0310c

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Specifications for Gases

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Specification for Arsine (AsH_3) in Cylinders, 99.94% Quality

SEMI C3.12-1109

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SEMI C3.20-0309

Specification for Helium (He), in Cylinders, 99.9995%

SEMI C3.24-0309

Specification for Sulfur Hexafluoride (SF_6) in Cylinders, 99.97% Quality

SEMI C3.26-0301

Specification for Tungsten Hexafluoride (WF_6) in Cylinders, 99.8% Quality

SEMI C3.27-1102

Specification for Boron Trifluoride (BF_3) in Cylinders, 99.0% Quality

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Specification for Chlorine (Cl_2), 99.996% Quality

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Specification for Disilane (Si_2H_6) in Cylinders, 97% Quality

SEMI C3.35-1109^E

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SEMI C3.37-1109

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SEMI C3.39-0304

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SEMI C3.51-1101

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SEMI C3.52-0200

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SEMI C3.54-0200^E

Gas Purity Guideline for Silane (SiH_4)

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SEMI C3.56-0600

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Specification for Carbon Dioxide, CO_2 , Electronic Grade in Cylinders

SEMI C3.58-0303

Specification for Octafluorocyclobutane, C_4F_8 , Electronic Grade in Cylinders

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Specification for Phosphine (PH_3) in Cylinders, 99.98% Quality

SEMI C6.2-93 (Reapproved 1102)

Particle Specification for Grade 20/0.02 Oxygen Delivered as Pipeline Gas

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Particle Specification for Grade 20/0.2 Hydrogen (H_2) Delivered as Pipeline Gas

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Particle Specification for Grade 20/0.02 Nitrogen (N_2) and Argon (Ar) Delivered as Pipeline Gas

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SEMI C56-0305 (Reapproved 0211)

Specifications and Guidelines for Dichlorosilane (SiH₂Cl₂)

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Specifications for Tungsten Hexafluoride (WF₆)

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Specifications for Polished Single Crystal Silicon Wafers

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Specification for Silicon Wafers for Use as Photovoltaic Solar Cells

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Specifications for Polished Monocrystalline Gallium Arsenide Wafers

SEMI M9.1-96^E (Reapproved 0308)

Standard for Round 50.8 mm Polished Monocrystalline Gallium Arsenide Wafers for Electronic Device Applications

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Standard for Round 2 Inch Diameter Polished Monocrystalline Gallium Arsenide Slices for Optoelectric Applications

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SEMI M9.5-96^E (Reapproved 0308)

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Standard Nomenclature for Identification of Structures and Features Seen on Gallium Arsenide Wafers

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Polished Wafer Defect Limits Table for Semi-Insulating Gallium Arsenide Wafers

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Specification for Round 50 mm Diameter Polished Monocrystalline Indium Phosphide Wafers

SEMI M23.2-0211

Specification for Round 76.2 mm (3 inch) Diameter Polished Monocrystalline Indium Phosphide Wafers

SEMI M23.3-0600 (Withdrawn 0811)

Standard for Rectangular Polished Monocrystalline Indium Phosphide Wafers

SEMI M23.4-0211

Specification for Round 100 mm Polished Monocrystalline Indium Phosphide Wafers for Electronic and Optoelectronic Device Applications (Dove-Tail Type)

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Specification for Round 100 mm Polished Monocrystalline Indium Phosphide Wafers for Electronic and Optoelectronic Device Applications (V-Groove Option)

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Guide for Developing Specifications for Silicon Wafer Surface Features Detected By Automated Inspection

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Test Method for Measuring Etch Pit Density (EPD) in Low Dislocation Density Gallium Arsenide Wafers

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Test Method for Measuring Etch Pit Density (EPD) in Low Dislocation Density Indium Phosphide Wafers

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Specification for Polished Reclaimed Silicon Wafers

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Test Method for Measuring Resistivity and Hall Coefficient and Determining Hall Mobility in Semi-Insulating GaAs Single Crystals

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Guide for Measurement of Surface Roughness of Planar Surfaces on Silicon Wafer

SEMI M41-0707

Specification of Silicon-on-Insulator (SOI) for Power Device/ICS

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SEMI M43-1109

Guide for Reporting Wafer Nanotopography

SEMI M44-0305 (Reapproved 0211)

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Specification for Silicon-on-Insulator (SOI) Wafers for CMOS LSI Applications

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Guide for Evaluating Chemical-Mechanical Polishing Processes on Films on Unpatterned Silicon Substrates

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Guide for Specifying Scanning Surface Inspection Systems for Silicon Wafers for the 130 nm, 90 nm, 65 nm, and 45 nm Technology Generations

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Practice for Determining Cost Components for Equipment Due to Measurement Variability and Bias

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Test Method for Time Dependent Dielectric Breakdown Characteristics of SiO₂ Films for Si Wafer Evaluation

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Guideline: Test Method for Measuring the Al Fraction in AlGaAs on GaAs Substrates by High Resolution X-Ray Diffraction

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Test Method for the EI2 Deep Donor Concentration in Semi-Insulating (SI) Gallium Arsenide Single Crystals by Infrared Absorption Spectroscopy

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Specifications for Sapphire Substrates to Use for Compound Semiconductor Epitaxial Wafers

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Test Method to Extract Effective Work Function in Oxide and High-K Gate Stacks Using the MIS Flat Band Voltage-Insulator Thickness Technique

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Practice for Determining Wafer Near-Edge Geometry from a Measured Thickness Data Array Using the ESFQR, ESFQD and ESBIR Metrics

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SEMI M73-0309

Test Method for Extracting Relevant Characteristics from Measured Wafer Edge Profiles

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Specification for 450 mm Diameter Mechanical Handling Polished Wafers

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Specifications for Polished Monocrystalline Gallium Antimonide Wafers

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Specification for Developmental 450 mm Diameter Polished Single Crystal Silicon Wafers

SEMI M77-1110

Practice for Determining Wafer Near-edge Geometry Using Roll-Off Amount, ROA

SEMI M78-1110

Guide for Determining Nanotopography of Unpatterned Silicon Wafers for the 130 nm to 22 nm Generations in High Volume Manufacturing

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Specification for Round 100 mm Polished Monocrystalline Germanium Wafers for Solar Cell Applications

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Mechanical Specification for Front-Opening Shipping Box Used to Transport and Ship 450 mm Wafers

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Guide to Defects Found on Monocrystalline Silicon Carbide Substrates

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SEMI MS1-0307

Guide to Specifying Wafer-Wafer Bonding
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Test Method for Step-Height Measurements of
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Terminology for MEMS Technology

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Test Method for Wafer Bond Strength
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Guide for Design and Materials for interfacing
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SEMI MS7-0708

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Specification for High Density Permanent
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SEMI P17-92 (Reapproved 0299)

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SEMI MF728-1106

Practice for Preparing an Optical Microscope for Dimensional Measurements

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SEMI MF1152-0305 (Reapproved 0211)

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SEMI MF1153-1106

Test Method for Characterization of Metal-Oxide-Silicon (MOS) Structures by Capacitance-Voltage Measurements

SEMI MF1188-1107

Test Method for Interstitial Oxygen Content of Silicon by Infrared Absorption with Short Baseline

SEMI MF1239-0305 (Reapproved 0211)

Test Method for Oxygen Precipitation Characteristics of Silicon Wafers by Measurement of Interstitial Oxygen Reduction

SEMI MF1366-0308

Test Method for Measuring Oxygen Concentration in Heavily Doped Silicon Substrates by Secondary Ion Mass Spectrometry

SEMI MF1388-0707

Test Method for Generation Lifetime and Generation Velocity of Silicon Material by Capacitance-Time Measurements of Metal-Oxide-Silicon (MOS) Capacitors

SEMI MF1389-1110

Test Methods for Photoluminescence Analysis of Single Crystal Silicon for III-V Impurities

SEMI MF1390-0707

Test Method for Measuring Warp on Silicon Wafers by Automated Noncontact Scanning

SEMI MF1391-1107

Test Method for Substitutional Atomic Carbon Content of Silicon by Infrared Absorption

SEMI MF1392-0307

Test Method for Determining Net Carrier Density Profiles in Silicon Wafers by Capacitance-Voltage Measurements with a Mercury Probe

SEMI MF1451-0707

Test Method for Measuring Sori on Silicon Wafers by Automated Non-Contact Scanning

SEMI MF1527-0307

Guide for Application of Certified Reference Materials and Reference Wafers for Calibration and Control of Instruments for Measuring Resistivity of Silicon

SEMI MF1528-0308

Test Method for Measuring Boron Contamination in Heavily Doped N-Type Silicon Substrates by Secondary Ion Mass Spectrometry

SEMI MF1529-1110

Test Method for Sheet Resistance Uniformity Evaluation by In-Line Four-Point Probe with the Dual-Configuration Procedure

SEMI MF1530-0707

Test Method for Measuring Flatness, Thickness, and Total Thickness Variation on Silicon Wafers by Automated Non-Contact Scanning

SEMI MF1535-0707

Test Method for Carrier Recombination Lifetime in Silicon Wafers by Noncontact Measurement of Photoconductivity Decay by Microwave Reflectance

SEMI MF1569-0307

Guide for Generation of Consensus Reference Materials for Semiconductor Technology

SEMI MF1617-0304 (Reapproved 0710)

Test Method for Measuring Surface Sodium, Aluminum, Potassium, and Iron on Silicon and EPI Substrates by Secondary Ion Mass Spectrometry

SEMI MF1618-1110

Practice for Determination of Uniformity of Thin Films on Silicon Wafers

SEMI MF1619-1107

Test Method for Measurement of Interstitial Oxygen Content of Silicon Wafers by Infrared Absorption Spectroscopy with P-Polarized Radiation Incident at the Brewster Angle

SEMI MF1630-1107

Test Method for Low Temperature FT-IR Analysis of Single Crystal Silicon for III-V Impurities

SEMI MF1708-1104

Practice for Evaluation of Granular Polysilicon by Melted-Zoner Spectroscopies

SEMI MF1723-1104

Practice for Evaluation of Polycrystalline Silicon Rods by Float-Zone Crystal Growth and Spectroscopy

SEMI MF1724-1104

Test Method for Measuring Surface Metal Contamination of Polycrystalline Silicon by Acid Extraction-Atomic Absorption Spectroscopy

SEMI MF1725-1110

Practice for Analysis of Crystallographic Perfection of Silicon Ingots

SEMI MF1726-1110

Practice for Analysis of Crystallographic Perfection of Silicon Wafers

SEMI MF1727-1110

Practice for Detection of Oxidation Induced Defects in Polished Silicon Wafers

SEMI MF1763-0706

Test Methods for Measuring Contrast of a Linear Polarizer

SEMI MF1771-0304

Test Method for Evaluating Gate Oxide Integrity by Voltage Ramp Technique

SEMI MF1809-1110

Guide for Selection and Use of Etching Solutions to Delineate Structural Defects in Silicon

SEMI MF1810-1110

Test Method for Counting Preferentially Etched or Decorated Surface Defects in Silicon Wafers

SEMI MF1811-0310

Guide for Estimating the Power Spectral Density Function and Related Finish Parameters from Surface Profile Data

SEMI MF1982-1110

Test Methods for Analyzing Organic Contaminants on Silicon Wafer Surfaces by Thermal Desorption Gas Chromatography

SEMI MF2074-0707

Guide for Measuring Diameter of Silicon and Other Semiconductor Wafers

SEMI MF2139-1103 (Reapproved 1110)

Test Method for Measuring Nitrogen Concentration in Silicon Substrates by Secondary Ion Mass Spectrometry

SEMI MF2166-0304

Practices for Monitoring Non-Contact Dielectric Characterization Systems Through Use of Special Reference Wafers

Traceability

- SEMI G71-0996 (Reapproved 0811)**
Specification for Barcode Marking of Intermediate Containers for Packaging Materials
- SEMI G83-0301 (Reapproved 0308)**
Specification for Bar Code Marking of Product Packages
- SEMI M12-0706**
Specification for Serial Alphanumeric Marking of the Front Surface of Wafers
- SEMI M13-0706**
Specification for Alphanumeric Marking of Silicon Wafers
- SEMI T2-0298 (Withdrawn 1110)**
Specification for Marking of Wafers with a Two-Dimensional Matrix Code Symbol
- SEMI T3-0302 (Reapproved 1108)**
Specification for Wafer Box Labels
- SEMI T4-0301 (Reapproved 0307)**
Specification for 150 mm and 200 mm Pod Identification Dimensions
- SEMI T5-1106**
Specification for Alphanumeric Marking of Round Compound Semiconductor Wafers
- SEMI T6-0697 (Withdrawn 1110)**
Procedure and Format for Reporting of Test Results by Electronic Data Interchange (EDI)
- SEMI T7-0303 (Reapproved 0709)**
Specification for Back Surface Marking of Double-Side Polished Wafers with a Two-Dimensional Matrix Code Symbol
- SEMI T8-1110**
Specification for Marking of Glass Flat Panel Display Substrates with a Two-Dimensional Matrix Code Symbol
- SEMI T9-1110**
Specification for Marking of Metal Lead-Frame Strips with a Two-Dimensional Data Matrix Code Symbol
- SEMI T10-0701 (Reapproved 0307)**
Test Method for the Assessment of 2D Data Matrix Direct Mark Quality
- SEMI T11-0703 (Reapproved 0709)**
Specification for Marking of Hard Surface Reticle Substrates
- SEMI T12-0710**
Specification for Tracing Jigs and Implements
 - SEMI T12.1-0704 (Reapproved 0710)**
Specification for SECS Protocol for Tracking Jigs and Implements
 - SEMI T12.2-1105**
Specification for XML Protocol for Tracking Jigs and Implements
- SEMI T13-1104 (Reapproved 0710)**
Specification for Device Tracking: Concepts, Behavior and Services
 - SEMI T13.1-1104 (Reapproved 0710)**
Specification for SECS Protocol for Device Tracking
 - SEMI T13.2-1104 (Reapproved 0710)**
Specification for XML Protocol for Device Tracking
- SEMI T14-0705**
Specification for Micro ID on 300 mm Silicon Wafers
 - SEMI T14.1-0705**
Specification for the Micro ID of Short Vertical Dimension on 300 mm Wafers
- SEMI T15-0705**
General Specification of Jig ID: Concept
- SEMI T16-0310**
Specification for Use of Data Matrix Symbology for Automated Identification of Extreme Ultraviolet Lithography Masks
- SEMI T17-0706**
Specification of Substrate Traceability
- SEMI T18-1106**
Specification of Parts and Components Traceability
- SEMI T19-0311**
Specification for Device Marking

SEMI T20-0710

Specification for Authentication of Semiconductors
and Related Products

SEMI T20.1-1109

Specification for Object Labeling to Authenticate
Semiconductors and Related Products in an
Open Market

SEMI T20.2-1109

Guide for Qualifications of Authentication
Service Bodies for Detecting and Preventing
Counterfeiting of Semiconductors and Related
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SEMI T20.3-0710

Specification for Service Communication for
Authentication of Semiconductors and Related
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