



FPD Materials & Components and FHE Japan Joint TC Chapter Meeting Summary and Minutes

SEMI Standards Japan Fall Meetings

Friday, October 13, 2023

Yamagata University/ Official Virtual TC Chapter Meeting (Hybrid)

9:00-12:00 [JST]

TC Chapter Announcements

Next TC Chapter Meeting:

- FPD Materials & Components Japan TC Chapter meeting will be held on Friday, February 16, 2024 15:00-17:00 via OVTCCM and at SEMI Japan, Tokyo, Japan.
- FHE Japan TC Chapter meeting will be held on Friday, February 9, 2024 13:00-15:00 via OVTCCM and at SEMI Japan, Tokyo, Japan.

Table 1 Meeting Attendees

Italics indicate virtual participants.

FPD Materials & Components TC Co-Chairs: Tadahiro Furukawa (Yamagata University), Ryoichi Watanabe (Japan Display), Toshimasa Eguchi (Sumitomo Bakelite)

FHE TC Co-Chairs: Tadahiro Furukawa (Yamagata University), Ryoichi Watanabe (Japan Display)

SEMI Staff: Akiko Yoshida (SEMI Japan)

<i>Company</i>	<i>Last</i>	<i>First</i>	<i>Company</i>	<i>Last</i>	<i>First</i>
AiQ Smart Clothing	Huang	Steve	NIPPON STEEL Chemical & Material	Nakatsuka	Jun
<i>Corning International</i>	<i>Okamura</i>	<i>Haruo</i>	Sumitomo Bakelite	Eguchi	Toshimasa
FUJIFILM	Ishizuka	Hiroshi	SK-Electronics	Miyazaki	Shohei
HOYA Corporation	Kondo	Keitaro	Toppan	Ito	Manabu
<i>Innolux Japan</i>	<i>Nakagawa</i>	<i>Takanobu</i>	Yamagata University	Furukawa	Tadahiro
Japan Display	Ryoichi	Watanabe	Yuasa System	Hyodo	Kei
<i>Kobe University</i>	<i>Inoue</i>	<i>Mari</i>	<i>SEMI Japan</i>	<i>Yoshida</i>	<i>Akiko</i>
<i>Komori Corporation</i>	<i>Ikeda</i>	<i>Hideki</i>			

Table 2 Leadership Changes

<i>WG/TF/SC/TC Name</i>	<i>Previous Leader</i>	<i>New Leader</i>
<i>FPD Materials & Components Japan TC Chapter</i>		
None		
<i>FHE Japan TC Chapter</i>		
None		

Table 3 Committee Structure Changes

<i>Previous WG/TF/SC Name</i>	<i>New WG/TF/SC Name or Status Change</i>
<i>FPD Materials & Components Japan TC Chapter</i>	



Table 3 Committee Structure Changes

<i>Previous WG/TF/SC Name</i>	<i>New WG/TF/SC Name or Status Change</i>
None	
<i>FHE Japan TC Chapter</i>	
None	

Table 4 Ballot Results

<i>Document #</i>	<i>Document Title</i>	<i>Committee Action</i>
<i>FPD Materials & Components Japan TC Chapter</i>		
7105	Reapproval of SEMI D60-0818, Test Method for Surface Scratch Resistance for FPD Polarizing Film and Cover Plastics for Mobile Displays	Passed
7106	Reapproval of SEMI D63-0818, Test Method for Depolarization Effect of FPD Color Filter	Passed
7107	Reapproval of SEMI D77-0618, Test Method for Measurements of Dimension of Films for FPD – Contour Matching Method	Passed
7110	Revision to SEMI D78-1018, With Title Change To: Test Method of Water Vapor Barrier Property for Plastic Films with High Gas Barrier for Electronic	Passed
<i>FHE Japan TC Chapter</i>		
6978	New Standard: Test Method and Guide for the Tactile Characteristics of Flexible Hybrid Electronics Materials and Products	Failed

#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

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
<i>FPD Materials & Components Japan TC Chapter</i>			
7110	SNARF	Flexible Display TF	Revision to SEMI D78-1018, With Title Change To: Test Method of Water Vapor Barrier Property for Plastic Films with High Gas Barrier for Electronic
<i>FHE Japan TC Chapter</i>			
None			

Table 6 Authorized Activities

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

<i>#</i>	<i>Type</i>	<i>SC/TF/WG</i>	<i>Details</i>
<i>FPD Materials & Components Japan TC Chapter</i>			
TBD	SNARF	FPD Mask TF	Line Item Revision to SEMI D38-0723, GUIDE FOR QUALITY AREA OF FLAT PANEL DISPLAY (FPD) MASKS
<i>FHE Japan TC</i>			
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
<i>FPD Materials & Components Japan TC Chapter</i>			
TBD	Cycle 9-23	FPD Mask TF	Line Item Revision to SEMI D38-0723, GUIDE FOR QUALITY AREA OF FLAT PANEL DISPLAY (FPD) MASKS
<i>FHE Japan TC Chapter</i>			
6978A	Cycle 9-23	Tactile Texture Characteristics for FHE TF	New Standard: Test Method and Guide for the Tactile Characteristics of Flexible Hybrid Electronics Materials and Products

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

#	TF	Title	Expiration Date
<i>FPD Materials & Components Japan TC Chapter</i>			
None			
<i>FHE Japan TC Chapter</i>			
None			

Table 9 SNARF(s) Abolished

#	TF	Title
<i>FPD Materials & Components Japan TC Chapter</i>		
None		
<i>FHE Japan TC Chapter</i>		
None		

Table 10 Standard(s) to receive Inactive Status

Standard Designation	Title
<i>FPD Materials & Components Japan TC Chapter</i>	
None	
<i>FHE Japan TC Chapter</i>	
None	

Table 11 New Action Items

Item #	Assigned to	Details
<i>FPD Materials & Components Japan TC Chapter</i>		
FPDM&C_202310_13_01	SEMI Staff	To forward the ballot adjudication results of Doc.#7105, 7106, 7107, and 7110 to ISC A&R Subcommittee for procedural review.
FPDM&C_202310_13_02	FPD Mask Task Force	To submit Line Item Revision to SEMI D38-0723, GUIDE FOR QUALITY AREA OF FLAT PANEL DISPLAY (FPD) MASKS for Cycle 9.
FPDM&C_202310_13_03	FPD Materials & Components Maintenance Task Force/ Flexible Display Task Force	To prepare 5 SNARFs by the next TC Chapter meeting.
<i>FHE Japan TC Chapter</i>		

Table 11 New Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
FHE_20231013_01	Tactile Texture Characteristics for FHE Task Force	To submit Doc.#6978A, Test method and Guide for The Tactile Characteristics of Flexible Hybrid Electronics Materials and Products, Letter Ballot for Cycle 9.

Table 12 Previous Meeting Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
<i>FPD Materials & Components Japan TC Chapter</i>		
20230125-01	Tadahiro Furukawa	To review SEMI D63-0818-EN for 5year review by next TC →Closed.
20230125-02	FPD Materials & Components Flexible Display Task Force	To review the documents according to the 5year review list →Closed.
<i>FHE Japan TC Chapter</i>		
FHE_JA_20230714_1	Tactile Texture Characteristics for FHE Task Force	To submit Doc.#6978 “Test method and Guide for The Tactile Characteristics of Flexible Hybrid Electronics Materials and Products” Letter Ballot for Cycle 6. →Closed.

1 Welcome, Reminders, and Introductions

Tadahiro Furukawa called the meeting to order at 9:00. The meeting reminders on antitrust issues, intellectual property issues and holding meetings with international attendance were reviewed. Attendees introduced themselves.

Attachment: 01_Meeting Reminders

2 Review of Previous Meeting Minutes

The FPD Materials & Components Japan TC Chapter reviewed the minutes of the previous meeting.

Motion: Approve the minutes for the previous FPD M&C Japan TC Chapter meeting with two corrections.

By / 2nd: By: Ryoichi Watanabe/ Japan Display Inc.
Second: Toshimasa Eguchi/ Sumitomo Bakelite Co., Ltd.

Discussion: None.

Vote: 10-Y 0-N. Motion Passed.

Attachment: 02_FPD M&C+Met_JA_Mins_230602 v2.0

The FHE Japan TC Chapter reviewed the minutes of the previous meeting.

Motion: Approve the minutes for the previous FHE Japan TC Chapter meeting as written.

By / 2nd: By: Ryoichi Watanabe/ Japan Display Inc.
Second: Manabu Ito/ TOPPAN Inc.

Discussion: None.

Vote: Result: 10-Y 0-N. Motion Passed.

Attachment: 03_FHE JA TC Minutes_230714_R1

3 Liaison Reports

3.1 FHE NA TC Chapter

Akiko Yoshida (SEMI Japan) reported for the FHE NA TC Chapter. Of note:

- The first TC Chapter meeting was held on September 18 after the NARSC approved the establishment of FHE NA TC Chapter at the SEMICON West meeting.
- Four TFOFs were approved by the TC.

Attachment: 04_NA FHE Liaison Report Sept2023 v1

3.2 FHE Taiwan TC Chapter

Akiko Yoshida (SEMI Japan) reported for the FHE Taiwan TC Chapter. Of note:

- The precious meeting was held on October 4, 2023 and Doc.#6873A, New Standard: Guide for Salt Mist and Washability Test Flow for Control Module Connector of Electronic textiles, passed committee review.
- Doc.#7104, New Standards for Test Method of Electromyography Sensing Technology of Flexible Hybrid Electronics and Electronic Textiles, will be finalized in November.

Attachment: 05_TW FHE TC Chapter Liaison Report_Oct 2023

4 SEMI Staff Report

Akiko Yoshida (SEMI Japan) gave the SEMI Staff Report. Of note:

- New publication staff joined SEMI in May, who will focus on processing ballots to reduce backlog and improve publishing time.
- SEMICON Japan 2023 will be held from December 13 to 15 at Tokyo Big Sight, where many of SEMI Standards meetings will be held.

Attachment: 06_Staff Report July 2023 v3

5 Ballot Review

NOTE 1: TC Chapter adjudication of ballots 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 file name for each balloted document is provided.

5.1 FPD Materials & Components Japan TC Chapter

5.1.1 *Doc.#7105, Reapproval of SEMI D60-0818, Test Method for Surface Scratch Resistance for FPD Polarizing Film and Cover Plastics for Mobile Displays*

- **Passed** the TC Chapter review as balloted. Refer to attachment below for full details.

5.1.2 *Doc.#7106, Reapproval of SEMI D63-0818, Test Method for Depolarization Effect of FPD Color Filter*

- **Passed** the TC Chapter review as balloted. Refer to attachment below for full details.

5.1.3 *Doc.#7107, Reapproval of SEMI D77-0618, Test Method for Measurements of Dimension of Films for FPD – Contour Matching Method*

- **Passed** the TC Chapter review as balloted. Refer to attachment below for full details.

5.1.4 *Doc.#7110, Revision to SEMI D78-1018, With Title Change To: Test Method of Water Vapor Barrier Property for Plastic Films with High Gas Barrier for Electronic*

- **Passed** the TC Chapter review as balloted. Refer to attachment below for full details.

Attachment: 07_7105_Ballot report_D60-0818_Reapproval
08_7106_Ballot report_D63-0818_Reapproval
09_7107_Ballot report_D77-0618_Reapproval
10_7110_Ballot report_D78-1018_Revision

5.2 FHE Japan TC Chapter

5.2.1 Doc.#6978, New Standard: Test Method and Guide for the Tactile Characteristics of Flexible Hybrid Electronics Materials and Products

- Persuasive Check

Motion: Negative is related and persuasive. (Needs > 1/3 votes to pass.)

Reason: The TF agrees with the Negative.

By: Mari Inoue / Kobe University

Second: Steve Huang / AiQ Smart Clothing Inc.

Discussion: None.

Result: 9-Y 0-N Voting Result: Pass - 100.00%

- Final Action

Motion: This Document failed TC Chapter review and will be returned to the TF for rework.

Reason: None.

By: Mari Inoue / Kobe University

Second: Steve Huang / AiQ Smart Clothing Inc.

Discussion: None.

Result: 10-Y 0-N Voting Result: Pass - 100.00%

Attachment: 11_6978_Ballot Review_Final

6 Task Force Reports

6.1 FPD Materials & Components Japan TC Chapter

6.1.1 Flexible Display Task Force

The Task Force report was substituted for Ballot Review for Doc. #7110, Revision to SEMI D78-1018, With Title Change To: Test Method of Water Vapor Barrier Property for Plastic Films with High Gas Barrier for Electronic

6.1.2 FPD Mask Task Force

Shohei Miyazaki (SK-Electronics) reported for the FPD Mask Task Force. SEMI D38-0723 was published, but there were some errors in the inequality symbol, so Line Item Revision to SEMI D38-0723, GUIDE FOR QUALITY AREA OF FLAT PANEL DISPLAY (FPD) MASKS was proposed.

Motion: Approve the SNARF for D38-0723 Line Item Revision.

By / 2nd: By: Shohei Miyazaki/ SK-Electronics Co., Ltd.

Second: Keitaro Kondo/ HOYA Corporation

Discussion: None.

Vote: 9-Y 0-N Motion Passed.

Motion: Authorize the Letter Ballot issuance for Line Item Revision to SEMI D38-0723, GUIDE FOR QUALITY AREA OF FLAT PANEL DISPLAY (FPD) MASKS for Cycle 9.

By / 2nd: By: Shohei Miyazaki/ SK-Electronics Co., Ltd.

Second: Keitaro Kondo/ HOYA Corporation

Discussion: None.

Vote: 10-Y 0-N Motion Passed.

Attachment: 12_230906 SNARF_D38

6.1.3 FPD Materials & Components Maintenance Task Force

Tadahiro Furukawa (Yamagata University) reported for the FPD Materials & Components Maintenance Task Force in accordance with the file. The Task Force will prepare SNARFs to revise/ reapprove the documents listed for 5-year review by the next TC meeting.

Attachment: 13_20231013Maintenance TF report

6.2 FHE Japan TC Chapter

6.2.1 FHE Terminology Task Force

Tadahiro Furukawa (Yamagata University) reported for the FHE Terminology Task Force. The Task Force has been working on the structure of the document.

6.2.2 Tactile Texture Characteristics for FHE Task Force

Mari Inoue (Kobe University) reported for the Tactile Texture Characteristics for FHE Task Force. The Task Force reviewed all the negatives to Doc.#6978, New Standard: Test Method and Guide for the Tactile Characteristics of Flexible Hybrid Electronics Materials and Products. As the document failed the committee review, the Task Force will revise the draft document and submit letter ballot.

Motion: Authorize the Letter Ballot issuance for Doc.#6978, New Standard: Test Method and Guide for the Tactile Characteristics of Flexible Hybrid Electronics Materials and Products for Cycle 9.

By / 2nd: By: Mari Inoue/ Kobe University
Second: Steve Huang/ AiQ Smart Clothing Inc.

Discussion: None.

Vote: 10-Y 0-N Motion Passed.

7 Old Business

7.1 FPD Materials & Components Japan TC Chapter

7.1.1 Project Period Review

None.

7.1.2 5-year Review

The following documents will be due for 5-year review. Revision/Reapproval SNARFs will be proposed at the next TC meeting by the responsible Task Forces.

- SEMI D67-0819, Test Method for Antifouling Property and Chemical Resistance of FPD Polarizing Films and Its Materials
- SEMI D30-0519, Test Method for Light Resistance in Flat Panel Display (FPD) Color Filters
- SEMI D29-0519, Test Method for Heat Resistance in Flat Panel Display (FPD) Color Filters
- SEMI D66-0519, Terminology for Plastic Substrates of Flexible Display
- SEMI D22-0818, Test Method for the Determination of Color, Transmittance of FPD Color Filter Assemblies

7.2 FHE Japan TC Chapter

7.2.1 Project Period Review

None.

7.2.2 5-Year Reviews

None.

8 New Business

8.1 FPD Materials & Components Japan TC Chapter

None.

8.2 FHE Japan TC Chapter

None.

9 Action Item Review

9.1 Open Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
<i>FPD Materials & Components Japan TC Chapter</i>		
20230125-02	FPD Materials & Components Flexible Display Task Force	To review the documents according to the 5year review list. →Closed.
<i>FHE Japan TC Chapter</i>		
FHE_JA_20230714_1	Tactile Texture Characteristics for FHE Task Force	To submit Doc.#6978 “Test method and Guide for The Tactile Characteristics of Flexible Hybrid Electronics Materials and Products” Letter Ballot for Cycle 6. →Closed.

9.2 New Action Items

<i>Item #</i>	<i>Assigned to</i>	<i>Details</i>
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FPDM&C_20231013_01	SEMI Staff	To forward the ballot adjudication results of Doc.#7105, 7106, 7107, and 7110 to ISC A&R Subcommittee for procedural review.
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FPDM&C_20231013_03	FPD Materials & Components Maintenance Task Force/ Flexible Display Task Force	To prepare 5 SNARFs by the next TC Chapter meeting.
<i>FHE Japan TC Chapter</i>		
FHE_20231013_01	Tactile Texture Characteristics for FHE Task Force	To submit Doc.#6978A, Test method and Guide for The Tactile Characteristics of Flexible Hybrid Electronics Materials and Products, Letter Ballot for Cycle 9.



10 Next Meeting and Adjournment

- FPD Materials & Components Japan TC Chapter meeting will be held on Friday, February 16, 2024 15:00-17:00 via OVTCCM and at SEMI Japan, Tokyo, Japan.
- FHE Japan TC Chapter meeting will be held on Friday, February 9, 2024 13:00-15:00 via OVTCCM and at SEMI Japan, Tokyo, Japan.

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

Adjournment: [16:00].

Respectfully submitted by:

Akiko Yoshida

Standards & EHS

SEMI Japan

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Minutes tentatively approved by:

<i>FPD Materials & Components Japan TC Chapter</i>	
Tadahiro Furukawa (Yamagata University), Co-chair	November 26, 2023
Ryoichi Watanabe (Japan Display, Co-chair	November 24, 2023
Toshimasa Eguchi (Sumitomo Bakelite), Co-chair	November 24, 2023
<i>FHE Japan TC Chapter</i>	
Tadahiro Furukawa (Yamagata University), Co-chair	November 26, 2023
Ryoichi Watanabe (Japan Display, Co-chair	November 24, 2023
Satoshi Maeda (TOYOBO), Co-chair	N/A

Table 13 Index of Available Attachments^{#1}

<i>Title</i>	<i>Title</i>
01_Meeting Reminders	02_FPD M&C+Met_JA_Mins_230602 v2.0
03_FHE JA TC Minutes_230714_R1	04_NA FHE Liaison Report Sept2023 v1
05_TW FHE TC Chapter Liaison Report_Oct 2023	06_Staff Report July 2023 v3
07_7105_Ballot report_D60-0818_Reapproval	08_7106_Ballot report_D63-0818_Reapproval
09_7107_Ballot report_D77-0618_Reapproval	10_7110_Ballot report_D78-1018_Revision
11_6978_Ballot Review_Final	12_230906 SNARF_D38
13_20231013Maintenance TF report	

^{#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 Akiko Yoshida at the contact information above.