

# Record of Letter Ballot Review by TC Chapter for Procedural Review

Region/Locale: [Japan](#)

Global Technical Committee: [Physical Interfaces & Carriers](#)

TC Chapter Cochairs: [Tsuyoshi Nagashima/Miraial](#), [Daisuke Sado/EAGLE INDUSTRY](#), [Yasuhisa Ito/Muratec](#)

Standards Staff: [Takeaki Hirabara](#)

	Scheduled in Background Statement	Actual
Date	<a href="#">March 4, 2026</a>	<a href="#">March 4, 2026</a>
Location	<a href="#">SEMI Japan / Official Virtual TC Chapter Meeting</a>	<a href="#">SEMI Japan / Official Virtual TC Chapter Meeting</a>
Reason for Change of Date and/or Location (if changed)		

Note: Refer to [Regulations ¶ 9.5](#) Exceptions for allowable reason to change.

## I. Document Number and Title

Document Number	Document Title
<a href="#">7332</a>	<a href="#">New Standard: Specification for Large JEDEC™ Tray Stack Load Port</a>

## II. Tally

Standards staff to fill in.

Voting Tally: [As-cast tally after close of voting period](#)

Note: A minimum of 60% of the Voting Interests that have TC Members within the global technical committee that issued the Letter Ballot must return Votes. ([Regulations ¶ 9.6.2.1.1](#))

Note: Refer to [Regulations § 3.2.1](#) for definition of Voting Interest.

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	53	÷	84	=	63.10%	≥60%
Intercommittee Ballot	33					
Voting Interest Reject(s)	1		Total Voters with Rejects			1
Voting Interest Accept(s)	54					

### III. Rejects

#### Voting Interest Reject 1 (Voting Interest Name: **Supika Mashiro**)

#### Voter Reject 1 (Voter: **Supika Mashiro/Tokyo Electron**)

#### Negative 1

<b>Negative</b>	Referenced Section/ Paragraph	*TF/TC Chapter to fill in, including text in the ballot if necessary.	
	Negative Text	*Original complete Negative text (e.g., issue, justification, suggestion) should be copied. The last sentence of 2.1 must not be a part of SCOPE, as it does not describe this Standard. [Suggestion] Move the last sentence to the Limitation section with some modification, such as, "3.2 trays that are contained inside a carrier but will not be delivered or picked up "bare" as a stack of trays are out side of the scope of this Standard." Comment: It may be better to relocate the NOTE 1 directly after the text suggested above in the Limitation section	
TF input (optional)			
<b>Withdrawal (check one)</b>	<input checked="" type="checkbox"/>	No Negative withdrawal made by Voter.	GO TO "Related" subsection
	<input type="checkbox"/>	Withdrawal document received by Standards staff on MM/DD/YYYY.	GO TO "Final" subsection → (A)
<b>Related</b>	<b>Motion and Reason (check one)</b>	<input checked="" type="checkbox"/>	'Related' is mutually agreed upon. (Needs no motion.) GO TO "Persuasive" subsection
		<input type="checkbox"/>	Negative is not related. (Needs ≥2/3 votes to pass.)
	Reason	XXXX	
	<b>Motion by/ 2<sup>nd</sup> by</b>	Name (Company)/Name (Company)	
	<b>Discussion</b>		
	<b>Result of Vote (check one)</b>	<input type="checkbox"/>	[Negative is not related.] < 2/3
<input type="checkbox"/>		2/3 ≤ [Negative is not related.]	GO TO "Final" subsection → (B)
<b>Persuasive</b>	<b>Motion and Reason (check one)</b>	<input checked="" type="checkbox"/>	Negative is related and persuasive. (Needs >1/3 votes to pass.)
		<input type="checkbox"/>	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)
	Reason	XXXX	
	<b>Motion by/ 2<sup>nd</sup> by</b>	Shoji Komatsu (Acteon NEXT LLC)/ Takayuki Nishimura (SCREEN Semiconductor Solutions Co., Ltd.)	
	<b>Discussion</b>	None	
		Result: 16-Y 0-N Voting Result: Pass - 100.00%	

Result of Vote (check one)	<input checked="" type="checkbox"/>	[Negative is related and persuasive.] > 1/3	Is a technical change recommended? (check one)	<input checked="" type="checkbox"/>	Y	GO TO "Address by Technical Change Option" subsection
	<input type="checkbox"/>	[Negative is related and not persuasive.] < 2/3		<input type="checkbox"/>	N	GO TO "Final" subsection → (E)
	<input type="checkbox"/>	2/3 ≤ [Negative is related and not persuasive.] < 90%	GO TO "Final" subsection → (C)			
	<input type="checkbox"/>	90% ≤ [Negative is related and not persuasive.]	GO TO "Not Significant Finding Option" subsection			
<b>Technical Change Recommendations</b>						
Original section/paragraph number and at least one full sentence are required in "FROM" and "TO" fields.						
Address by Technical Change Option	1	<b>FROM: Section/Paragraph 2.1</b>				
		This specification defines a load port for Bx (large) trays specified by JEDEC DR4.10. The tray stack load port is intended to provide a standard interface when transferring a JEDEC tray stack from one equipment or equipment component to another within a cluster of equipment modules. The trays are not contained inside a carrier but will be delivered or picked up "bare" as a stack of trays.  NOTE 1: For large Bx JEDEC trays stored in a Large Tray Stack FOUNDRY, SEMI E182 compatible load ports should continue to be used as the standard interface.				
		<b>TO: Section/Paragraph 2.1</b>				
	This specification defines a load port for Bx (large) trays specified by JEDEC DR4.10. The tray stack load port is intended to provide a standard interface when transferring a JEDEC tray stack from one equipment or equipment component to another within a cluster of equipment modules. <del>The trays are not contained inside a carrier but will be delivered or picked up "bare" as a stack of trays.</del>					
	NOTE 1: <del>The trays are not contained inside a carrier but will be delivered or picked up "bare" as a stack of trays.</del> For large Bx JEDEC trays stored in a Large Tray Stack FOUNDRY, SEMI E182 compatible load ports should continue to be used as the standard interface.					
	<b>Justification (if necessary)</b>					
2	<b>FROM: Section/Paragraph XXX</b>					
	<b>TO: Section/Paragraph xxx</b>					
	<b>Justification (if necessary)</b>					
<b>Motion</b>		Negative is addressed by the technical change(s).				
<b>Motion by/2<sup>nd</sup> by</b>		Shoji Komatsu (Acteon NEXT LLC)/ Takayuki Nishimura (SCREEN Semiconductor Solutions Co., Ltd.)				
<b>Discussion</b>		None				
Result of Vote (check one)		Result: 17-Y 0-N Voting Result: Pass - 100.00%				
		<input checked="" type="checkbox"/>	2/3 ≤ [Negative is addressed by the technical change(s).]		GO TO "Incorporation of the Technical Change" subsection	
		<input type="checkbox"/>	[Negative is not addressed by the technical change(s).] < 2/3		GO TO "Final" subsection → (E)	
☐ -	<b>Motion</b>	To incorporate the technical change(s).				

	Motion by/2 <sup>nd</sup> by	Shoji Komatsu (Acteon NEXT LLC)/ Takayuki Nishimura (SCREEN Semiconductor Solutions Co., Ltd.)	
	Discussion	None	
	Result of Vote (check one)	<input checked="" type="checkbox"/>	90% ≤ [Agree to incorporate.]
<input type="checkbox"/>		[Disagree to incorporate.] > 10%	GO TO “Final” subsection → (E)
Not Significant Finding Option	This option can be used only “if the TC Chapter finds a Negative not persuasive by a vote equal to or greater than 90% of the persons voting on the action”. (Regulations ¶ 9.6.1.4.5.2)		
	Use of “Not significant finding option” (check one)	<input type="checkbox"/>	It is mutually agreed upon to term the Negative “not significant”. GO TO “Final” subsection → (D)
		<input type="checkbox"/>	It is mutually agreed upon to term the Negative “significant”. GO TO “Final” subsection → (C)
		<input type="checkbox"/>	Whether or not the Negative is “not significant” is decided by a vote.
	Motion	The Negative is “not significant”.	
Motion by/ 2 <sup>nd</sup> by	Name (Company)/Name (Company)		
Vote	<input type="checkbox"/>	XX Y-XX N; Motion passed with simple majority	GO TO “Final” subsection → (D)
	<input type="checkbox"/>	XX Y-XX N; Motion failed with simple majority	GO TO “Final” subsection → (C)
Final	(check if applicable)	<input type="checkbox"/>	(A) Withdrawn (counted under h in disposition)
		<input type="checkbox"/>	(B) Not related (counted under i in disposition)
		<input type="checkbox"/>	(C) Related and not persuasive (significant)
		<input type="checkbox"/>	(D) Not significant (counted under j in disposition)
		<input type="checkbox"/>	(E) Related and persuasive and not addressed by technical change DOCUMENT FAILS
	<input checked="" type="checkbox"/>	(F) Addressed by technical change (counted under k disposition)	
(check if applicable)	<input type="checkbox"/>	Comment generated. Refer to Section V-(ii) Comment # X.	

This table is needed for each Negative.

Check only when the Document has not been failed.

1	Original number (#) of Negatives	(g)	
0	Number of Negatives withdrawn	(h)	
0	Number of Negatives found not related	(i)	
0	Number of Negatives found not significant	(j)	
1	Number of Negatives addressed by technical change (Negative becomes not significant)	(k)	
Final	<input checked="" type="checkbox"/>	$g - (h + i + j + k) = 0$	Reject is Not Valid and is not included in the denominator of § VI. Approval Conditions Check
	<input type="checkbox"/>	$g - (h + i + j + k) > 0$	Reject is included in the denominator of § VI. Approval Conditions Check
	<input type="checkbox"/>	Reject without a Negative	Not Valid

This table is needed for each Voting Interest Reject.

Note: If all of the Negatives included with a Reject Vote are withdrawn, determined to be not related, or determined to be not significant, the Reject Vote is not valid. (*Regulations* ¶ 9.4.3.3)  
 Note: A Negative addressed by a technical change is automatically considered to be not significant. (*Regulations* ¶ 9.6.1.4.5.2)

## IV. Other Technical Issues

NONE

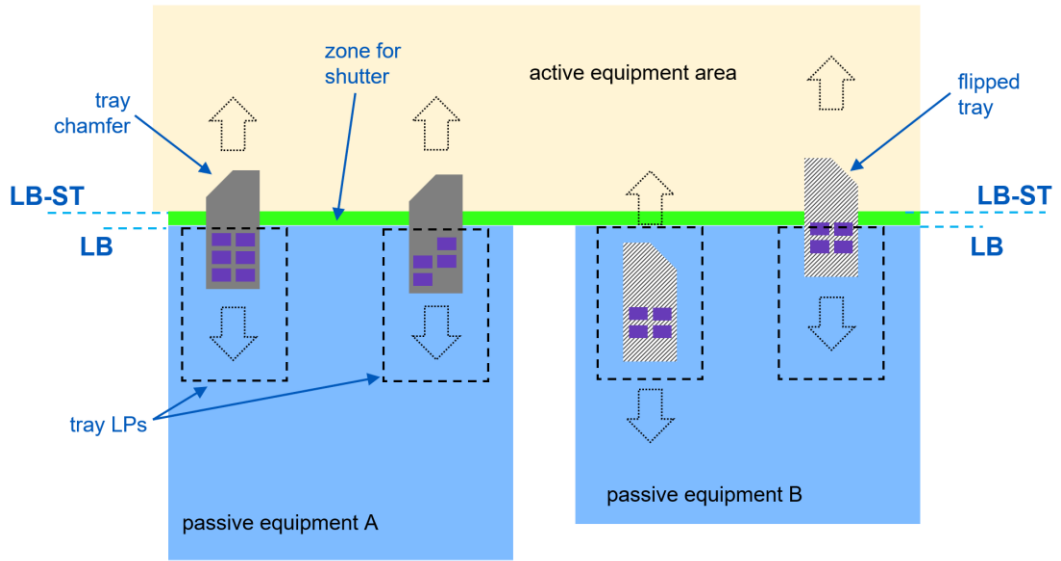
## V. Comments

### V- (i) Voters' Comments

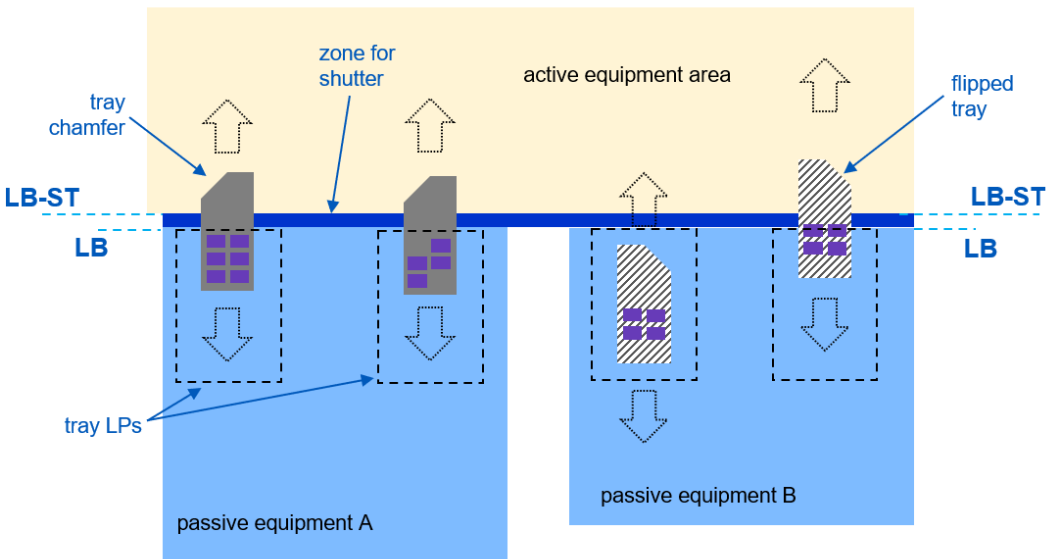
Commenter 1 (**Larry Hartsblue/UA Associates**) - Comment 1

Comment	*TF/TC Chapter to fill in section/paragraph #, if necessary.	
	Style Manual Table 2 2-1 (7) Black and white is preferred. Color is discouraged; but if used, it must be recognizable in black and white. I printed Figure A1-2 in black and white. In the middle illustration, the red could not be distinguished from the dark gray.	
Action	The TC Chapter agreed to do one of the following actions.	
	*No motion is required in this step.	
	<input type="checkbox"/>	Already addressed by Commenter #, Comment #
	<input type="checkbox"/>	No further action was taken by the TC Chapter.
	<input type="checkbox"/>	Refer to the TF for more consideration.
	<input type="checkbox"/>	New Business
<input checked="" type="checkbox"/>	Editorial Change	
Options for editorial change (check one)	<input type="checkbox"/>	<b>Case 1: No vote in this section:</b> To be included and voted on as a group in § VI. <i>Editorial Changes Other than Those Voted on in § V.</i>
	<input checked="" type="checkbox"/>	<b>Case 2: Voted in this section:</b> Original section number and at least one full sentence are required in "FROM" and "TO" fields.

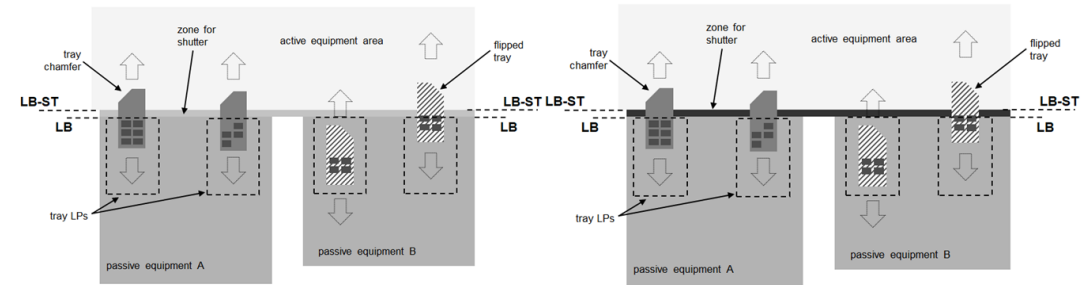
FROM: Section/Paragraph Figure.6



TO: Section/Paragraph Figure.6



Justification (If necessary)



		<p><b>FROM: Section/Paragraph Figure A1-1</b></p>
2		<p><b>TO: Section/Paragraph Figure A1-1</b></p>
		<p><b>Justification (if necessary)</b></p>
<p><b>Motion</b></p>	<p>To approve above editorial change(s)</p>	
<p><b>Motion by/2<sup>nd</sup> by</b></p>	<p>Shoji Komatsu (Acteon NEXT LLC)/ Daisuke Sado (EAGLE INDUSTRY CO., LTD)</p>	
<p><b>Discussion</b></p>	<p>None</p>	
<p><b>Vote</b></p>	<p>Result: 17-Y 0-N Voting Result: Pass - 100.00%</p>	

*This table is needed for each Comment accompanied a Vote*

**Commenter 2 (Tomoko Suzuki/Daifuku) - Comment 1**

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Comment</b></p>	<p><b>*TF/TC Chapter to fill in section/paragraph #, if necessary.</b></p>
	<p>7.5.3: The last word of the first sentence "up" may not be necessary.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Action</b></p>	<p>The TC Chapter agreed to do one of the following actions.</p>
	<p><b>*No motion is required in this step.</b></p>
	<p>Already addressed by Commenter #, Comment #</p>

		No further action was taken by the TC Chapter.
		Refer to the TF for more consideration.
		New Business
	X	Editorial Change
	Options for editorial change (check one)	<input type="checkbox"/> <b>Case 1: No vote in this section:</b> <b>To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.</b>
		<input checked="" type="checkbox"/> <b>Case 2: Voted in this section:</b> <b>Original section number and at least one full sentence are required in "FROM" and "TO" fields.</b>
Editorial Changes	1	<b>FROM: Section/Paragraph 7.5.3</b> During a handoff, the active equipment (robot end effector or similar) shall reach into the access zone for tray stack delivery or pickup up. The access zone shall remain free of obstructions and reserved for the active equipment during the handoff, which shall enter the access zone only during an active handoff. After the handoff is complete, the passive equipment robot (or other passive equipment feature) may reach into the access zone to pick, place, or access a tray stack. The passive equipment shall interact with or enter the access zone only when the handoff is complete and/or inactive
		<b>TO: Section/Paragraph 7.5.3</b> During a handoff, the active equipment (robot end effector or similar) shall reach into the access zone for tray stack delivery or pickup <del>up</del> . The access zone shall remain free of obstructions and reserved for the active equipment during the handoff, which shall enter the access zone only during an active handoff. After the handoff is complete, the passive equipment robot (or other passive equipment feature) may reach into the access zone to pick, place, or access a tray stack. The passive equipment shall interact with or enter the access zone only when the handoff is complete and/or inactive.
		<b>Justification (If necessary)</b>
Editorial Changes	2	<b>FROM: Section/Paragraph xxx</b>
		<b>TO: Section/Paragraph xxx</b>
		<b>Justification (If necessary)</b>
<b>Motion</b>	To approve above editorial change(s)	
<b>Motion by/2<sup>nd</sup> by</b>	Shoji Komatsu (Acteon NEXT LLC)/ Daisuke Sado (EAGLE INDUSTRY CO., LTD)	
<b>Discussion</b>	None	
<b>Vote</b>	Result: 17-Y 0-N Voting Result: Pass - 100.00%	

## VI. Editorial Changes Other than Those Voted on in § V

None

## VII. Approval Conditions Check

### VII. - (i). Approval Rate

**APPROVAL CONDITION 1:** All Negatives have been discussed and were withdrawn, found not related, found not persuasive, or addressed by a technical change. (*Regulations ¶ 9.6.2.1.2*)

**APPROVAL CONDITION 2:** At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations ¶ 9.6.2.1.3*)

**Note:** If both approval conditions are not satisfied, the Document fails.

		Accepts		(Accepts + Valid Rejects)			
Approval Rate	=	54		54	=	100%	≥90%

### VII. – (ii) Approval Level (check one)

**Note:** Refer to *Regulations § 9.6.2* for further information.

#### Globally Approved (No Ratification Ballot needed):

The Letter Ballot meets the Letter Ballot approval conditions for the global technical committee.

#### Need a Ratification Ballot:

The Letter Ballot meets the Letter Ballot approval conditions for the TC Chapter and a Ratification Ballot will be issued to validate technical changes.

## VIII. Safety Check

**Note:** Refer to *Regulations § 15* for further information.

Motion	<input checked="" type="checkbox"/>	<b>This is not a Safety Document</b> , when all safety-related information is removed, the Document is still technically sound and complete. ( <i>Regulations ¶ 8.7.1</i> )
	<input type="checkbox"/>	<b>This is a Safety Document</b> , when all safety-related information is removed, the Document is not technically sound and complete. ( <i>Regulations ¶ 8.7.2</i> )
	<input type="checkbox"/>	Safety Checklist ( <i>Regulations ¶ 15.3</i> ) is complete and has been included with the Document throughout the balloting process. ( <i>Regulations ¶ 15.1.2</i> )
Motion by/2 <sup>nd</sup> by		Shoji Komatsu (Acteon NEXT LLC)/ Daisuke Sado (EAGLE INDUSTRY CO., LTD)
Discussion		None
Vote		Result: 16-Y 0-N Voting Result: Pass - 100.00%

## IX. Intellectual Property (IP) Check

**Note: This Letter Ballot may cover all or part of a Standard or Safety Guideline. Regardless of the coverage, this IP check applies to the entire Standard or Safety Guideline\*. Refer to Regulations § 16 for further information.**

x	The TC Chapter meeting chair asked those participating, if they were aware of any patented technology that might be relevant (refer to <i>Regulations</i> ¶ 16.3.1.1) to the Standard or Safety Guideline; or, any copyrighted items or trademarks that are used/reproduced (refer to <i>Regulations</i> ¶ 16.4.1.2) in the Standard or Safety Guideline. (Also refer to <i>Regulations</i> § 8.8)				
x	The question is NOT answered in affirmative (No potentially material patented technology or use/reproduction of copyrighted items/trademarks is known.)	<b>GO TO SECTION X.</b>			
	The question is answered in affirmative	Is any of the known IPs a patented technology?	Yes, at least one of them is a patented technology	<b>GO TO IX (a) "Patented Technology" subsection</b>	
			No	<b>GO TO IX (b) "Copyright items" subsection</b>	

### IX(a) Patented Technologies subsection

#### IX(a1) Total numbers of Patented Technologies to be dealt with

<b># Fill number</b>	(l) Known Patented Technology that might be relevant to the Standard/Safety Guideline	<b># Fill number</b>	(m) Number of patented technologies first became known to the TC Chapter on or after the day of the issuance of this Letter Ballot	<b>Postpone assessment of such patented technologies to be performed at the next scheduled TC Chapter meeting.</b>
		<b># Fill number</b>	(n) Number of patented technologies first became known to the TC Chapter before the day of the issuance of this Letter Ballot	<b>GO TO IX (a2)</b>

#### IX(a2) Assessment of disclosed patented technologies

<b>Disclosed patented technology #1</b> (Brief description, e.g., patent title and number):		<b>Date of Assessment (If different from the date of Letter Ballot adjudication)</b> MM/DD/YYYY			
Is disclosed patented technology #1 found to be "might be material" to the Standard/Safety Guideline?	YES (It is a PMPT)	Is the use of this PMPT technically justified?	YES	<b>PROCEED to assess NEXT one, or if this is the last one, GO TO IX(a3)</b>	
	NO		NO	<b>The Document is failed and returned to the TF</b>	
	NO	No further action is needed for patented technology #1			

*This table is needed for each disclosed patented technology.*

**IX(a3) LOA status check of PMPT of which inclusion assessed to be justified**

LOA Status of PMPT #1					
Has an LOA for this patented technology been received from every owner ?		YES	PROCEED to check NEXT one, or if this is the last one, GO TO IX(b)		
		NO	MOTION		Ask ISC for special permission to publish.
					Quit activity. The Document is failed and returned to the TF
					Wait for LOA PROCEED to check NEXT one, or if this is the last one, GO TO IX(b1)
			Motion by/ 2 <sup>nd</sup> by	Name (Company)/Name (Company)	
			Discussion	XXXX	
			Vote	XX Y-XX N; Motion passed (or failed)	

*This table is needed for each PMPT of which inclusion assessed to be justified.*

**IX(b1) Total numbers of copyrighted items to be dealt with**

# Fill number	(o) Known copyrighted items that are used or reproduced to the Standard/Safety Guideline	o > 0	There is at least one known copyrighted items that might be relevant to the Standard/Safety Guideline	GO TO IX (b2)
		o = 0	There is no disclosed copyrighted item	GO TO IX (c)

**IX(b2) Assessment of disclosed copyrighted items**

Disclosed copyrighted item #1					
<i>(Brief description of its use in the Document):</i>					
Is disclosed copyrighted item #1 used or reproduced in the Standard/Safety Guideline?		YES	Is the use/reproduction of this copyrighted item technically justified?	YES	PROCEED to assess NEXT one, or if this is the last one, GO TO IX(b3)
				NO	The Document is failed and returned to the TF
		NO	No further action is needed for copyrighted item #1		

*This table is needed for each disclosed copyrighted item.*

**IX(b3) Copyright release status check of copyrighted item of which inclusion assessed to be justified**

Copyright release Status of copyrighted item #1					
Has the copyright release been received from its owner ?.		YES	PROCEED to assess NEXT one, or if this is the last one, GO TO IX(c)		
		NO	≧		Ask ISC for special permission to publish.

			Quit activity.	The Document is failed and returned to the TF
			Wait for copyright release letter	PROCEED to check NEXT one, or if this is the last one, GO TO IX(c)
			Motion by/ 2 <sup>nd</sup> by	Name (Company)/Name (Company)
			Discussion	XXXX
			Vote	XX Y-XX N; Motion passed (or failed)

This table is needed for each copyrighted item of which use/reproduction assessed to be justified.

### IX(c) Assessment of disclosed (identified) trademark

Is there any trademark in the Standard/Safety Guideline?	YES	Is every instance of trademark use technically justified?	YES	GO TO IX(d)
			NO	The Document is failed and returned to the TF
	NO	GO TO IX(d)		

### IX(d) IP check completion condition check

The co-chair checks if any Patented Technologies first become known to the TC Chapter on or after the day of the issuance of this Letter Ballot? i.e., m>0 in IX(a1)	YES	Sections IX(a2) and IX(a3) shall be completed and recorded for such patented technologies at next scheduled meeting of the TC Chapter. Until then, the TC Chapter shall NOT go to X (making motion to pass/fail this Document) (refer to Regulations ¶16.4.1.2) Until then this Letter Ballot Review is on hold.
	NO	GO TO X

## X. Action for This Document

Motion		This Document passed TC Chapter review as balloted and will be forwarded to the ISC A&R SC for procedural review.
		This Document passed TC Chapter review with editorial changes and will be forwarded to the ISC A&R SC for procedural review.
	X	This Document passed TC Chapter review with technical changes and with or without editorial changes and will be forwarded to the ISC A&R SC for procedural review. A Ratification Ballot will be issued to verify the technical changes.
		This Document failed TC Chapter review and will be returned to the TF for rework.
		This Document failed TC Chapter review and work will be discontinued.
Motion by/ 2 <sup>nd</sup> by		Shoji Komatsu (Acteon NEXT LLC)/ Daisuke Sado (EAGLE INDUSTRY CO., LTD)
Discussion		None
Vote		Result: 17-Y 0-N Voting Result: Pass - 100.00%
Final Action		x Motion passed
		Motion failed

Note: If the use of PMPT or copyrighted item is justified by the TC Chapter, LOA or release form must be received before publication can proceed.