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

Region/Locale: North America
Global Technical Committee: Metrics

TC Chapter Cochairs: David Bouldin (Fab Consulting); Vladimir Kraz (BestESD)

Mark Frankfurth (Cymer)

Standards Staff: Inna Skvortsova

	Scheduled in Background Statement	Actual
Date	July 12, 2017	July 12, 2017
Location	San Francisco, CA/USA	San Francisco, CA/USA
Reason for Change of Date and/or Location (if changed)		

Note: See Regulations ¶ 9.5 Exception for allowable reason to change.

#### I. Document Number and Title

<b>Document Number</b>	Document Title
5596A	New Standard: GUIDE TO ASSESS AND MINIMIZE
	ELECTROMAGNETIC INTERFERENCE (EMI) IN A
	SEMICONDUCTOR MANUFACTURING
	ENVIRONMENT

#### 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* ¶ 9.7.1.1)

#### Voting Tally (with example values):

Voting Interest:	Returned Votes		Distribution		Return Rate	
Letter Ballot	35	÷	56	=	62.5%	≥60%
Intercommittee Ballot	28					
Voting Interest Reject(s)	1		Total	Vote	rs with Rejects	1
Voting Interest Accept(s)	21					

Note: See Regulations § 3.2.1 for definition of Voting Interest.

#### III. Rejects

# Voting Interest Reject 1 (Voting Interest Name: AFF\_Crockett, Alan) Voter Reject 1 (Voter: Crockett, Alan, self)

neg	ative 1								
	Referenced	*TF/TC Chapter to fill in	n, includi	ng text in the bal	lot if I	nec	essary.		
	Section/	Relevant sections of the document:							
z	Paragraph	13.5 Mitigation of Radiated Emission Recommendations 13.6 Mitigation of Conducted Emission Recommendations							
Negative					, suggestion) should be				
ati√		copied.	galive lex	t (e.g., issue, jus	ınıcaı	.1011	, suggestion) should be		
/е	No mating Tand	•	nt seems 1	to assume that th	ere w	vill k	pe problems with equipment		
	Negative Text		neral: The document seems to assume that there will be problems with equipment at conforms to EMC requiring possible extensive modifications (paragraphs 13.5 &						
							hat can be done must be		
		done. I don't think the	ere is any	value to justify t	he et	tort	and expense.		
TF	input (optional)								
	\\\\:\	X No Negative withdr	awal mad	e by Voter.			GO TO "Related" subsection		
	Withdrawal (check one)	Withdrawal docume	ant receive	ad by Standards st	aff on	`	GO TO "Final" subsection		
	(check one)	MM/DD/YYYY.	SIIL IECEIVE	ou by Standards Si	iaii Ui	•	→ (A)		
		X 'Related' is mutually	v agreed i	inon (Needs no r	notio	n )	GO TO "Persuasive"		
Related	Motion and			•			subsection		
ate	Reason (check one)	negative is not rela	Negative is not related. (Needs ≥2/3 votes to pass.)						
ď	(Check one)	Reason	Reason XXXX						
		Negative is related	and persu	asive. (Needs >1/	/3 vot	es t	o pass.)		
					<b>-</b>				
	Motion and Reason	X Negative is related	<u> </u>						
	(check one)						lifications – just the routine		
	(000000)	Pagan		reasonable care (e.g., keeping everything in its proper condition,					
		Reason	Reason tidying up things) for reduction of EMI.  This document is a Guide. Any measurements						
				nmended, not requ			7 mg measuremente are		
Pe	Motion by/ 2 <sup>nd</sup> by	Vladimir Kraz (BestESD	)/ Arnold S	Steinman (Electror	nics W	/ork	shop)		
Persua	,	Supika Mashiro (TEL) -	- while "ex	ktensive modificat	ion" is	s sta	ated in negative, no extensive		
asi	Discussion	modification exists in the					,		
sive		5 Y-0N; Motion passed.							
						Υ	GO TO "Address by		
		[Negative is related persuasive.] > 1/3	and	ls a technical		Y	Technical Change Option"		
		persuasive.j > 1/3		change recommended?			subsection		
	Result of Vote	[Negative is related	and not	(check one)		N	GO TO "Final" subsection		
	(check one)	persuasive.] < 2/3					→ (E)		
		2/3 ≤ [Negative is re and not persuasive		GO TO "Final" s	ubse	ctio	n → (C)		
		90% < [Negative is	-	CO TO "Not Cim	n ifi n c	nt F	linding Ontion!! autocation		
		and not persuasive		GO TO "Not Significant Finding Option" subsection					

Pin No	This option can be used only "if the TC Chapter finds a Negative not persuasive by a vote greater than 90% of the persons voting on the action". (Regulations ¶ 9.6.4.4.2)								
t Sign	Use of "Not	X	It is mutually ag significant".	greed upon to term the Negative "not	GO TO "Final" subsection → (D)				
Not Significant Finding Option	significant finding option" (check one)		It is mutually ag	greed upon to term the Negative	GO TO "Final" subsection → (C)				
			the Negative is "not significant" is decide	ed by a vote.					
			(A)	Withdrawn (counted under h in disp	oosition)				
			(B)	Not related (counted under i in disp	osition)				
	(check if		(C)	Related and not persuasive (significa	nt)				
Final	applicable)	Χ	(D)	Not significant (counted under j in d	isposition)				
a		( <del>- 1</del>		Related and persuasive and not addressed by technical change	DOCUMENT FAILS				
			(F)	Addressed by technical change (cou	nted under k disposition)				
	(check if applicable)		Comment gene	nt generated. See Section V-(ii) Comment # X.					

					-				
Ne	Referenced Section/ Paragraph		*TF/TC Chapter to fill in, including text in the ballot if necessary.  Section 11 Measurements						
Negative	Negative Text	cop Sec	ied.	ve text (e.g., issue, justification type of measurement equipme	,				
TFi	input (optional)								
	Withdrawal	Х	No Negative withdrawa	ıl made by Voter.	GO TO "Related" subsection				
	(check one)		Withdrawal document r	received by Standards staff on	GO TO "Final" subsection → (A)				
R	Motion and	Х	'Related' is mutually ag	reed upon. (Needs no motion.)	GO TO "Persuasive" subsection				
Related	ପ୍ର Motion and ହୁ Reason		Negative is not related.	(Needs ≥2/3 votes to pass.)					
ed	(check one)		Reason	xxxx					
			Negative is related and	persuasive. (Needs >1/3 votes t	o pass.)				
P	Motion and Reason	Х	Negative is related and	not persuasive. (Needs ≥2/3 vot	es to pass.)				
Persuasive	ersuas (check one)		Reason	Measurements by antennae are appropriate standards such as El					
ve	Motion by/ 2 <sup>nd</sup> by	shop)							
	Discussion	NOI	NE						
		5 Y-	0N; Motion passed.						
		Щ_	- only manani passage.						

			[Negative is related and persuasive.] > 1/3		Is a technical change recommended?		Υ	GO TO "Address by Technical Change Option" subsection
	Result of Vote (check one)		[Negative is related and persuasive.] < 2/3	d not	(check one)		N	GO TO "Final" subsection → (E)
			2/3 ≤ [Negative is relate and not persuasive.] < 9		GO TO "Final" s	ubse	ctio	n → (C)
		X	90% ≤ [Negative is rela and not persuasive.]	ited	GO TO "Not Sigi	nifica	nt F	inding Option" subsection
No Fin			sed only "if the TC Cha he persons voting on					uasive by a vote equal to or 4.4.2)
t Sign	Use of "Not	X	It is mutually agreed upon to term the Negative "not significant".					GO TO "Final" subsection → (D)
Not Significant Finding Option	significant finding option" (check one)		It is mutually agreed up "significant".	oon to t	erm the Negative			GO TO "Final" subsection → (C)
	,		Whether or not the Neg	gative i	s "not significant"	is ded	cide	d by a vote.
			(A) With	drawn	(counted under l	h in c	lispo	osition)
			(B) Not r	related	(counted under	i in d	ispo	osition)
	(check if		(C) Rela	ited an	d not persuasive (	signif	fican	t)
Final	applicable)	X	(D) Not s	signific	ant <mark>(counted und</mark>	ler j i	n di	sposition)
<u>a</u>	(E) Related and persuasive and not addressed by technical change						DOCUMENT FAILS	
			(F) Addr	ressed	by technical chan	ge (c	oun	ted under k disposition)
	(check if applicable)		Comment generated. S	See Se	ction V-(ii) Comn	nent a	# X.	

3	ative o								
Ne	Referenced Section/ Paragraph		TC Chapter to fill in, in	ncluding text in the ballot if nec	essary.				
Negative			ginal complete Negativied.	ve text (e.g., issue, justification	, suggestion) should be				
е	Negative Text	equ	2.3.3.1.1 measurements before installation is only really useful if surrounding quipment is installed and operating. If the room is empty whatever you would learn ould change every time a new tool were installed.						
TF	input (optional)								
	Withdrawal	Х	No Negative withdrawa	I made by Voter.	GO TO "Related" subsection				
	(check one)		Withdrawal document r MM/DD/YYYY.	eceived by Standards staff on	GO TO "Final" subsection → (A)				
R	Motion and Reason (check one)		'Related' is mutually ag	reed upon. (Needs no motion.)	GO TO "Persuasive" subsection				
elat			Negative is not related.	(Needs ≥2/3 votes to pass.)					
ed			Reason	xxxx					

	1								
		Negative is related	d and persu	asive. (Needs >1/	3 vote	es t	o pass.)		
	Motion and	X Negative is related	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)						
	Reason (check one)	Reason	Even in an empty FAB there are already power lin other infrastructure that may affect EMI environr section deals with all cases, including where installed or moved in already populated FAB.						
Persuasive	Motion by/ 2 <sup>nd</sup> by	Vladimir Kraz (BestESI	D)/ Arnold S	Steinman (Electror	nics W	ork:	shop)		
sua	Discussion	None							
sive		5 Y-0N; Motion passed	d.						
•	Result of Vote	[Negative is related persuasive.] > 1/3		Is a technical change recommended?		Y	GO TO "Address by Technical Change Option" subsection		
	(check one)	[Negative is related persuasive.] < 2/3		(check one)		N	GO TO "Final" subsection → (E)		
		2/3 ≤ [Negative is and not persuasive		GO TO "Final" s	ubsec	ctio	n <b>→</b> (C)		
			90% ≤ [Negative is related and not persuasive.]		nificaı	nt F	inding Option" subsection		
Nc Fir		be used only "if the TO of the persons voting					uasive by a vote equal to or 4.4.2)		
t Sigr nding	Use of "Not	X It is mutually agree significant".	ed upon to	term the Negative	"not		GO TO "Final" subsection → (D)		
Not Significant Finding Option	significant finding option" (check one)	It is mutually agree "significant".	ed upon to	term the Negative			GO TO "Final" subsection → (C)		
		Whether or not the	e Negative i	is "not significant"	is dec	ided	d by a vote.		
		(A)	Withdrawn	(counted under l	h in di	ispo	osition)		
		(B)	Not related	(counted under	i in di	spc	osition)		
	(check if	(C)	Related an	d not persuasive (	signifi	ican	t)		
Final	applicable)	X (D)	Not signific	ant <mark>(counted und</mark>	ler j in	ı di	sposition)		
<u>a</u>		(E)		d persuasive and by technical chan			DOCUMENT FAILS		
		(F)				oun	ted under k disposition)		
	(check if applicable)	Comment generate	ed. See Se	ction V-(ii) Comn	nent #	Χ.			

This table is needed for each Negative.

. 109	ative 4								
	Defenses		TC Chapter to fill in, inc						
	Referenced Section/		s.3.2 before and after mai t once per year (i.e., repe			ictor	man	ufacturing equipment, and at	
	Paragraph	leas	t once per year (i.e., repe	aleu	ariridally).				
Z	3 4								
Negative			•	e tex	t (e.g., issue, just	ifica	tion	, suggestion) should be	
ιtiν		cop		.4		- 4l-:		annonio	
е	Negative Text							cessary? Is it practical perts every day. Is there	
	Negative Text		ROI for this? I think th				a OA	oorto overy day. To thoro	
TF i	input (optional)								
			1					GO TO "Related"	
	Withdrawal		No Negative withdrawal	mad	e by Voter.			subsection	
	(check one)		Withdrawal document re	ceive	ed by Standards st	aff o	n	GO TO "Final" subsection	
			MM/DD/YYYY.					<b>→</b> (A)	
		Х	'Related' is mutually agre	eed ເ	upon. (Needs no n	notic	on.)	GO TO "Persuasive"	
Re	Motion and				· · ·			subsection	
Related	Reason		Negative is not related.	(Nee	ds ≥2/3 votes to p	ass.	.)		
ed	(check one)		Reason	(XX)					
			7	\////					
		\ \ \	Na matina ia malata di amidir		anima (Nondo de	2	44		
	Motion and	X Negative is related and persuasive. (Needs >1/3 votes to pass.)							
			Negative is related and not appropriate (Negative Software)						
	Reason (check one)		Negative is related and not persuasive. (Needs ≥2/3 v				vot	es to pass.)	
	(Check one)		D						
			Reason	ΧXX					
	Motion by/		" · · · · · · · · · · · · · · · · · · ·						
Ъ	2 <sup>nd</sup> by	Vlac	dimir Kraz (BestESD)/ Arr	nold S	Steinman (Electron	iics V	/Vork	shop)	
Persuasive	Discussion								
sua		5Y-(	O N; Motion passed						
vis		<u> </u>	I wouldn't passed						
е			[Negative is related and		ls a technical	Χ	Υ	GO TO "Address by	
		Х	persuasive.] > 1/3		change			Technical Change Option" subsection	
	Result of Vote				recommended?			subsection	
	(check one)		[Negative is related and	not	(check one)		N	GO TO "Final" subsection	
			persuasive.] < 2/3					→ (E)	
			2/3 ≤ [Negative is related		GO TO "Final" s	ubse	ctio	$n \rightarrow (C)$	
			and not persuasive.] < 9 90% ≤ [Negative is relate						
			and not persuasive.]	<del>c</del> u	GO TO "Not Sign	nifica	ant F	inding Option" subsection	
	Technical Chance	je R	ecommendations						
Address									
dre		para	agraph number and at le	east	one full sentence	are	requ	ired in "FROM" and "TO"	
SS	fields.								

#### FROM: Section/Paragraph 12.3.3 12.3.3 EMI Surveys and Audits should be performed: 12.3.3.1 before installation of semiconductor manufacturing equipment, 12.3.3.1.1 It is recommended that the supplier or the equipment user conduct the EMI power and ground audit portion of an EMI Audit (see SEMI E33 Appendix 2) on the semiconductor manufacturing equipment ground (i.e., ground port) prior to installation of EMI-sensitive semiconductor manufacturing equipment and after installation of all equipment. 12.3.3.2 before and after maintenance of semiconductor manufacturing equipment, and at least once per year (i.e., repeated annually). TO: Section/Paragraph 12.3.3 **Technical Changes** 12.3.3 EMI Surveys and Audits should be performed as appropriate: 12.3.3.1 before installation of semiconductor manufacturing equipment, 12.3.3.1.1 It is recommended that the supplier or the equipment user conduct the EMI power and ground audit portion of an EMI Audit (see SEMI E33 Appendix 2) on the semiconductor manufacturing equipment ground (i.e., ground port) prior to installation of EMI-sensitive semiconductor manufacturing equipment and after installation of all equipment. 12.3.3.2 before and after maintenance of semiconductor manufacturing equipment, and at least once per year (i.e., repeated annually). Justification (If necessary) The way audit is described at the beginning of section 12, it is implied that survey would involve rather intensive measurement. With 12.3.3 and this paragraph, it is indicated both survey and audit are recommended before and after every maintenance in addition to an annual check. And the recommendation could be an over-specification for certain types of maintenances Motion Negative is addressed by the technical change(s). Motion by/2<sup>nd</sup> by Vladimir (Company)/Arnold (Electronics Workshop) **Discussion** 5 Y-0 N; Motion passed. GO TO "Incorporation of the 2/3 ≤ [Negative is addressed by the technical Result of Vote Technical Change" change(s).] subsection (check one) GO TO "Final" subsection [Negative is not addressed by the technical change(s).] < 2/3 **→** (E) Motion To incorporate the technical change(s). ncorporation Motion by/2nd by Technical Change Vladimir (Company)/Arnold (Electronics Workshop) NONE Discussion 5 Y-0 N; Motion passed. GO TO "Final" subsection 으 90% ≤ [Agree to incorporate.] Result of Vote fthe (check one) GO TO "Final" subsection [Disagree to incorporate.]>10% → (E) Withdrawn (counted under h in disposition) (A) Not related (counted under i in disposition) (B) (check if (C) Related and not persuasive (significant) applicable) Not significant (counted under j in disposition) (D) Related and persuasive and not (E) **DOCUMENT FAILS**

addressed by technical change

	X	(F)	Addressed by technical change (counted under k disposition)
(check if applicable)		Comment generate	ed. See Section V-(ii) Comment # X.

This table is needed for each Negative.

<u></u>	alive 5							
	Referenced Section/	*TF/TC Chapter to fill in, including text in the ballot if necessary.						
Neg	Paragraph	Section 12.1 Overview						
Negative	Negative Text	*Original complete Negative copied.  The survey described in the testing we do for compliant	nis section app			suggestion) should be		
TFi	nput (optional)							
	Withdrawal	X No Negative withdrawa	Il made by Vote			GO TO "Related" subsection		
	(check one)	Withdrawal document r MM/DD/YYYY.	eceived by Star	dards staff o	n	GO TO "Final" subsection → (A)		
R	Motion and	X 'Related' is mutually ag	reed upon. (Ne	eds no motic	on.)	GO TO "Persuasive" subsection		
Related	Reason	Negative is not related.	(Needs ≥2/3 vo	otes to pass.	.)			
ed	(check one)	Reason	xxxx					
		Negative is related and persuasive. (Needs >1/3 votes to pass.)						
	Motion and Reason (check one)	X Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)						
	(oneon ene)	Reason	The voter does	not identify w	vhat i	s the problem.		
P	Motion by/ 2 <sup>nd</sup> by	Vladimir Kraz (BestESD)/ Arnold Steinman (Electronics Workshop)						
Persuasive	Discussion	None						
uas		5 Y-0N; Motion passed.						
ive	Result of Vote	[Negative is related and persuasive.] > 1/3	ls a tech change recomm		Υ	GO TO "Address by Technical Change Option" subsection		
	(check one)	[Negative is related and persuasive.] < 2/3		one)	N	GO TO "Final" subsection → (E)		
		2/3 ≤ [Negative is related and not persuasive.] <	90%	Final" subse	ectio	n → (C)		
		X 90% ≤ [Negative is related and not persuasive.] GO TO "Not Significant Finding Option" subsection						
Not Significan		be used only "if the TC Cha 6 of the persons voting on				lasive by a vote equal to or 4.4.2)		
ot fican		X It is mutually agreed up significant".	GO TO "Final" subsection → (D)					

	Use of "Not significant finding option"		It is mutually aç "significant".	greed upon to term the Negative	GO TO "Final" subsection → (C)				
	(check one)		Whether or not	Whether or not the Negative is "not significant" is decided by a vote.					
	(check if applicable)		(A)	Withdrawn (counted under h in disp	position)				
			(B)	Not related (counted under i in disposition)					
			(C)	Related and not persuasive (significa	nt)				
Final		X	(D)	Not significant (counted under j in d	isposition)				
<u>a</u>			(E)	Related and persuasive and not addressed by technical change	DOCUMENT FAILS				
			(F)	Addressed by technical change (cou	nted under k disposition)				
	(check if applicable)		Comment gene	erated. See Section V-(ii) Comment # X					

neg	legative 6							
	Referenced Section/	*TF/T	C Chapter to fill in, i	ncludi	ng text in the bal	lot if	nec	essary.
Neg	Paragraph	13.2.1.5 Radiated Emission						
Negative		*Orig		ve tex	t (e.g., issue, jus	tifica	tion	, suggestion) should be
	Negative Text	13.2.1				nen a	sta	ndard (i.e. calibrated)
TF	input (optional)							
	Withdrawal (check one)		No Negative withdrawa	al made	e by Voter.			GO TO "Related" subsection
			Withdrawal document MM/DD/YYYY.	receive	ed by Standards s	taff o	n	GO TO "Final" subsection → (A)
R	Motion and	X 'I	X 'Related' is mutually agreed upon. (Needs no motion.)				n.)	GO TO "Persuasive" subsection
Related	Reason	١	Negative is not related. (Needs ≥2/3 votes to pass.)					
ed	(check one)	F	Reason	xxxx	(			
		١	Negative is related and	d persu	asive. (Needs >1	/3 vo	tes t	o pass.)
	Motion and	X	Negative is related and not persuasive. (Needs ≥2/3 votes to pass.)					
Persuasive	Reason (check one)	F	Reason	the (http:/	www.aaronia.com max. dimension	/prod is or	lucts nly 3	/antennas/BicoLOG-20300-X/
asive	Motion by/ 2 <sup>nd</sup> by	Vladir	Vladimir Kraz (BestESD)/ Arnold Steinman (Electronics Workshop)					shop)
	Discussion	None						
		5 <b>Y</b> -0	N; Motion passed.					
	Result of Vote (check one)		Negative is related an persuasive.] > 1/3	d	Is a technical change recommended? (check one)		Υ	GO TO "Address by Technical Change Option" subsection
					,			

	i								
			[Negative is related and persuasive.] < 2/3	not			N	GO TO "Final" subsection → (E)	
			2/3 ≤ [Negative is related and not persuasive.] < 9		GO TO "Final" s	subse	ctio	n → (C)	
		Х	90% ≤ [Negative is relate and not persuasive.]	ed	GO TO "Not Sig	ınifica	nt F	inding Option" subsection	
No: Fin			sed only "if the TC Cha he persons voting on th					uasive by a vote equal to or 4.4.2)	
t Sign	Use of "Not	X	It is mutually agreed upon to term the Negative "not significant".					GO TO "Final" subsection → (D)	
Not Significant Finding Option	significant finding option" (check one)		It is mutually agreed upon to term the Negative "significant".					GO TO "Final" subsection → (C)	
			Whether or not the Negative is "not significant" is decided by a vote.					d by a vote.	
			(A) Withd	lrawn (	(counted under	h in d	lisp	osition)	
			(B) Not re	elated	(counted under	i in di	ispo	osition)	
	(check if		(C) Relate	Related and not persuasive (signific			ican	ant)	
Final	applicable)	Χ	(D) Not si	Not significant (counted under j in			n di	disposition)	
al			(E) Related and persuasive and not addressed by technical change				DOCUMENT FAILS		
			(F) Addre	Addressed by technical change (counted under k disposition)				ted under k disposition)	
	(check if applicable)		Comment generated. Se	ee Sec	ction V-(ii) Com	ment #	<b>X</b> .		

This table is needed for each Negative.

#### **Disposition of Voting Interest Reject 1**

Check only when the Document has not been failed.

6	Original	Original number (#) of Negatives (g)						
0	Number	Number of Negatives withdrawn (h)						
0	Number	of N	egatives found not related		(i)			
5	Number of Negatives found not significant (j)							
1			egatives addressed by technicates the significant)	al change (Negative	(k)			
		X	g - (h + i + j + k) = 0	Reject is Not Valid and is not included in the denominator of § VI. Approval Conditions Check				
	Final		<b>g</b> - ( <b>h</b> + <b>i</b> + <b>j</b> + <b>k</b> ) >0	Reject is included in the denominator of § VI.  Approval Conditions Check				
			Reject without a Negative	Not Valid				

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* ¶ 9.6.4.4.2)

#### **V. Comments**

V- (i) Voters' Comments
Commenter 1 (Alan Crockett/Self) - Comment 1

	O TETTO Charten to fill in coefficient received to the coe								
Som	*TF	/TC Chapte	r to fill in section/paragraph #, if necessary.						
Comment	Ad	Add to paragraph 5.1 the acronym EOS, which is used paragraph 13.2.1.4.							
	Th	The TC Chapter agreed to do one of the following actions.							
	*No	motion is	required in this step.						
>		Already ad	dressed by Commenter #, Comment #						
Action		No further	action was taken by the TC Chapter.						
		Refer to the	e TF for more consideration.						
		New Busin	ess						
	Χ	Editorial Cl	<u> </u>						
Editorial Changes	1	TO: Section 5 Section 5 EOS ele	Case 1: No vote in this section:  To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.  Case 2: Voted in this section:  Original section number and at least one full sentence are required in "FROM" and "TO" fields.  ection/Paragraph 1 Abbreviations and Acronyms  on/Paragraph 2 Abbreviations and Acronyms  ectrical overstress  ion (If necessary)  EOS is already defined in 5.2.2. Add EOS to list of acronyms in section 5.1.						
Motion	-	-	To approve above editorial change(s)						
Motion	by/2	nd by	Vladimir Kraz (BestESD)/ Arnold Steinman (Electronics Workshop)						
Discus	sion		None						
Vote			5 Y-0 N; Motion passed.						
_	_								

#### Commenter 1 (Alan Crockett/Self) - Comment 2

Comment	wo 2) T	1) 7.2.2 Change propagating to many equipment." "many pieces of equipment" would be better grammar. 14.1 also has "many equipment"; 2) The line under 12.3.3.2 "at least once per year" needs either its own paragraph number, or to be part of 12.3.3.2								
	Th	The TC Chapter agreed to do one of the following actions.								
	*No	motion is	requ	uired in this step.						
Ac		Already ad	ddres	ssed by Commenter #, Comment #						
Action		No further	actio	on was taken by the TC Chapter.						
		Refer to th	ne TF	for more consideration.						
ļ		New Busir								
	X	Editorial C	Chan							
		Options		Case 1: No vote in this section:						
		for editorial		To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.						
		change		Case 2: Voted in this section:						
		(check one)	Х	Original section number and at least one full sentence are required in "FROM" and "TO" fields.						
		since they connect the entire facility together. Since power lines and ground connect all of the equipment in a semiconductor manufacturing environment, electrical noise originated in one location is capable of propagating to many equipment.  14.1 Some equipment is compliant with standards and regulations governing EMC (e.g., SEMI E3 EC EMC Directive), however many equipment are not. The mere fact of compliance with EM standards and regulations is not a guarantee that this equipment will not produce electrical noise actual installations.								
Editorial Changes	1	7.2.2 Power since they equipment is capable of 14.1 Some EC EMC I	er and conn in a s of pro equip Direct lards	Paragraph I ground wires are the most common conduit of conducted emissions in the facility teet the entire facility together. Since power lines and ground connect all of the semiconductor manufacturing environment, electrical noise originated in one location pagating to many pieces of equipment.  The present is compliant with standards and regulations governing EMC (e.g., SEMI E33, ive), however many pieces of equipment are not. The mere fact of compliance with and regulations is not a guarantee that this equipment will not produce electrical noise tions.						
	2	Justification (If necessary) English grammar correction.  FROM: Section/Paragraph 12.3.3.2 before and after maintenance of semiconductor manufacturing equipment, and								

	12.3.3.2 be 12.3.3.3 a	tion/Paragraph efore and after maintenance of semiconductor manufacturing equipment, and at least once per year (i.e., repeated annually).  tion (If necessary) g error fix.	
Motion	•	To approve above editorial change(s)	
Motion by	y/2 <sup>nd</sup> by	Vladimir Kraz (BestESD)/ Arnold Steinman (Electronics Workshop)	
Discussion		None	
Vote		4 Y-0 N; Motion passed.	

Commenter 1 (Alan Crockett/Self) - Comment 3

		iter i (Alan Crocket/Self) - Comment 3									
	Comment	*TF/TC Chapter to fill in section/paragraph #, if necessary.									
	nent	13.4	13.4 the list of related documents is too long to be helpful.								
		Th	The TC Chapter agreed to do one of the following actions.								
		*No	*No motion is required in this step.								
	A		Already addressed by Commenter #, Comment #								
	Action		No further action was taken by the TC Chapter.								
			Refer to the TF for more consideration.								
		Х	New Business								
			Editorial C	Change							
			Options	Case 1: No vote in this section:							
			for editorial	To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.							
			change	Case 2: Voted in this section:							
			(check one)	Original section number and at least one full sentence are required in "FROM" and "TO" fields.							

Commenter 2 (Larsen, Sean/LAM) - Comment 1

Com	*TF/TC Chapter to fill in section/paragraph #, if necessary.							
Comment	Sug	We appear to have a formatting issue here Suggestion / Justification Correct as appropriate						
	The TC Chapter agreed to do one of the following actions.							
>	*No motion is required in this step.							
Action	Already addressed by Commenter #, Comment #							
] 5	X No further action was taken by the TC Chapter.							
	Refer to the TF for more consideration.							

New Busi	ness
Editorial C	Change
Options	Case 1: No vote in this section:
for editorial	To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.
change	Case 2: Voted in this section:
(check one)	Original section number and at least one full sentence are required in "FROM" and "TO" fields.

Commenter 3 (Tominaga, Tadamasa/Murata) - Comment 1

	*TF/TC Chapter to fill in section/paragraph #, if necessary.							
Comment	The sentences are not consistent with the idea and sentences of the leader, and there is a discrepancy.  The sentences are not consistent with the idea and sentences of the leader, and there is a discrepancy. Therefore, it is not accept.  However, This Guide does not apply to manufacturing equipment within the scope of SEMI E33, therefore I abstain from this ballot.							
	The TC Chapter agreed to do one of the following actions.							
	*No motion is required in this step.							
Ą		Already addressed by Commenter #, Comment #						
Action	Х	No further action was taken by the TC Chapter.						
		Refer to the TF for more consideration.						
	New Business							
		Editorial C	Chang	ge				
		Options		Case 1: No vote in this section:				
		for editorial		To be included and voted on as a group in § VI. Editorial Changes Other than Those Voted on in § V.				
		change (check		Case 2: Voted in this section:				
		one)		Original section number and at least one full sentence are required in "FROM" and "TO" fields.				

### V-(ii) Comments Created by Handling Negative NONE

## 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* ¶ 9.7.1.2)

APPROVAL CONDITION 2: At least 90% of the sum of valid Voting Interest Accept and Voting Interest Reject Votes must be Accept. (*Regulations* ¶ 9.7.1.3)

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

		Accepts		(Accepts + Valid Rejects)			
Approval Rate	=	21	1	21	=	100.0%	≥90%

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

Note: See Regulations § 9.7.2 for further information.

Globally Approved (No Ratification Ballot needed):
The Letter Ballot meets the Letter Ballot approval conditions for the global technical committee.

X 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: See Regulations § 15 for further information.

	X	Th is	<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</i> ¶ 8.7.1)				
Motion				ety Document, when all safety-related information is removed, the Document is not and complete. (Regulations ¶ 8.7.2)			
		Safety Checklist ( <i>Regulations</i> ¶ 15.3) is complete and has been included with the Document throughout the balloting process. ( <i>Regulations</i> ¶ 15.1.2)					
ı	Motion by/2 <sup>nd</sup> by		by/2 <sup>nd</sup> by	Vladimir Kraz (BestESD)/ Arnold Steinman (Electronics Workshop)			
Discussion		ussion	None				
	Vote		ote	4 Y-0 N; Motion passed			

### IX. Intellectual Property (IP) Check

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

X	The TC Chapter meeting chair asked those participating, if they were aware of any potentially material patented technology or copyrighted items* in the Standard or Guideline. ( <i>Regulations</i> ¶ 8.8.1)				
	X	No potentially material patented technology or reproduction of copyrighted items is known.			

<sup>\*</sup> Note: Such potentially material patented technology or copyrighted items might have become known since the Standard or Safety Guideline was last reviewed, or might become relevant due to this Letter Ballot.

#### X. Action for This Document

Motion		This Document passed TC Chapter review as balloted and will be forwarded to the ISC A 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 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.					
I	Motion by/ 2 <sup>nd</sup> by		Vladimir Kraz (BestESD)/ Arnold Steinman (Electronics Workshop)				
	Discussion		NONE				
	Vote		4 Y-0 N				
F	Final Action		X	Motion passed			
				Motion failed			

Standards staff to record the result of the A&R procedural review here:

	Approved for publication
	Approved pending acceptance of the Ratification Ballot
	Not approved
Re	eason:
	Re