

## User Registration

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PCN Date: 4/9/2014		Effective Date: 7/14/2014					
Title: Transition to Rev D for Si822x							
Originator: Ashish Gokhale	Phor	ne: 512 532 5379		Dept: Marketing			
Customer Contact: Kathy Haggar	Phor	ne: 512 532 5261		Dept: Sales			
PCN Type:							
🗌 Datasheet 🗌 Fou	ndry			Packing			
🛛 Product Revision 🗌 Asse	embly			Labeling			
🗌 Discontinuance 📃 Test	t			Other			
Last Order Date: Not Applicable							
	PC	N Details					
Description of Change:							
Silicon Labs, in order to maintain continuity of supply and the same levels of lead time responsiveness and service our customers expect, is pleased to announce a polyimide change for the Si822x products. The change replaces the current polyimide with a new polyimide used as a passivation layer within the package. If you have questions about this PCN, please contact your local Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at <u>www.silabs.com</u> .							
Reason for Change:							
The previous polyimide has been discontinued and replaced with a revised polyimide by the current supplier.							
Impact on Form, Fit, Function, Quality, Reliability:							
There is no impact to form, fit, function, quality or reliability. The new polyimide material supports the same form, fit, functionality, reliability and performance attributes as the previous polyimide material.							

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Product Identification: Old product New product Si8220BB-A-IS Si8220BB-D-IS Si8220CB-A-IS Si8220CB-D-IS Si8220DB-A-IS Si8220DB-D-IS Si8220BD-A-IS Si8220BD-D-IS Si8220CD-A-IS Si8220CD-D-IS Si8220DD-A-IS Si8220DD-D-IS Si8221CC-A-IS Si8221CC-D-IS Si8221DC-A-IS Si8221DC-D-IS Last Date of Unchanged Product: 7/14/2014

Qualification Samples:

Samples available upon request. Please contact your Silicon Labs sales representatives to order samples. A list of Silicon Labs sales representatives is available at <u>www.silabs.com</u>.

Specific conditions of acceptance of this change will be considered on a case by case basis if written notice is submitted within 30 days of this notice. To request further data or inquire about this notification, please contact your local Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at <a href="http://www.silabs.com">www.silabs.com</a>.

In some cases rejection of a change notice may impact Silicon Labs product pricing, delivery, quality, or reliability.

Customer Early Acceptance Sign Off:

Customers may approve early PCN acceptance by completing the information below:

Early Acceptance: Date: \_\_\_\_\_

Name:

Company: \_\_\_\_

Email your early Acceptance approval to: <u>katherine.haggar@silabs.com</u>

**Qualification Data:** 

Please see Appendix A and B.

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Rev. E

Appendix A

## Si8220 2.5A Driver New PI Qualification Report

W7101F1 Product Qualification Plan and Report

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Part Rev D, Vangard Fabrication, ASECL Assembly except as noted						
			End	Notes	Summary	St at us
ccelerated Environment Stress Tes	sts - 16-WBSO					
JA110		-	0/ 80	1		
	ots, N=>25		0/80	1	4 lots	
Vcc=5V, 96 hours		-	0/80	1	0/320	
		-	0/ 80	1,2		Pass
		-	0/80	1		
	ots, N=>25	-	0/80	1	4 lots	
500 cycles		-	0/80	1	0/320	
		-		1,2		Pass
				1		
175°C, 500hr 3 ໄ	ots, N=>25	-		1	1 1	
		-	0/80	1	0/320	
		Q30949	0/ 80	1,2		Pass
ccelerated Environment Stress Tes	sts - 8-SOIC					
JA110		Q28932	0/ 80	1		
130°C, 85%RH 3 ໄ	ots, N=>25	Q28935	0/77	1	4 lots	
Vcc=5V, 96 hours		Q28938	0/80	1	0/317	
		Q30948	0/ 80	1,2		Pass
JA104		Q28934	0/80	1		
	ots, N=>25	Q28937	0/80	1	3 lots	
500 cycles		Q28940	0/78	1	0/238	
		Q30947	0/ 80	1		Pass
JA103		-	0/80	1		
175°C, 500hr 3 ໄ	ots, N=>25	-	0/80	1	3 lots	
		-	0/80	1	0/240	
		Q30949	0/80	1,2		Pass
ccelerated Lifetime Simulation Te	sts					
JA108		Q27679	0/79			
125°C, Dynamic 3 ע	ots, N=>77	Q28440	0/ 80		3 lots	
Vcc=5V, 1000 hours		Q28441	0/ 80		0/239	Pass
JA108		Q27572	0/510			
125°C, Dynamic 3 li	ots, N=>500	-	0/812		5 lots	
· · ·			0/800		0/3226	
		-				
		-		2		Pass
	Test Condition   Quescelerated Environment Stress Te     JA110   130°C, 85%RH   31     Vcc=5V, 96 hours   31     JA104   Cond C: -65°C to 150°C   31     JA103   175°C, 500hr   31     JA104   Cond C: -65°C to 150°C   31     JA103   175°C, 500hr   31     JA104   Signal Stress   31     Coelerated Environment Stress   Te     JA103   175°C, 500hr   31     JA104   Cond C: -65°C to 150°C   31     JA103   175°C, 500hr   31     JA103   175°C, 500hr   31     Coelerated Lifetime Simulation Te   JA108   31     JA108   125°C, Dynamic   31     JA108   JA108   31	Test Condition     Qualification       ccelerated Environment Stress Tests - 16-WBSO     JA110       130°C, 85%RH     3 lots, N=>25       Vcc=5V, 96 hours     3 lots, N=>25       JA104     3 lots, N=>25       Cond C: -65°C to 150°C     3 lots, N=>25       JA103     175°C, 500hr     3 lots, N=>25       JA103     175°C, 500hr     3 lots, N=>25       JA104     Sites Tests - 8-SOIC       JA103     130°C, 85%RH     3 lots, N=>25       JA104     Sites Tests - 8-SOIC       JA104     Sites N=>25       JA104     Sites N=>25       JA104     Sites N=>25       JA104     Sites N=>25       JA103     Sites N=>25       JA104     Sites N=>25       JA103     Sites N=>25       JA108     Sites N=>77       Vcc=5V, 1000 hours     Sites N=>5	Test Condition     Qualification     Start       DA110     JA110     Q29194       130°C, 85%RH     3 lots, N=>25     Q29197       Vcc=5V, 96 hours     Q29192     Q30948       JA104     Q29192     Q30948       Cond C: -65°C to 150°C     3 lots, N=>25     Q29192       Cond C: -65°C to 150°C     3 lots, N=>25     Q29193       JA103     Q29193     Q30947       JA103     Q29193     Q29193       175°C, 500hr     3 lots, N=>25     Q29196       Q29605     Q30949     Q29605       Q30949     Q29605     Q30949       Cocelerated Environment Stress Tests - 8-SOIC     Q28932       JA110     Q28932     Q28932       130°C, 85%RH     3 lots, N=>25     Q28938       Q30948     JA104     Q28934       Cond C: -65°C to 150°C     3 lots, N=>25     Q28937       500 cycles     3 lots, N=>25     Q28931       JA104     Q28933     Q28934       Cond C: -65°C to 150°C     3 lots, N=>25     Q28936       Q28931     Q30947	Test Condition     Qualification     Lot ID or Start     Fai/UPass or End       UA110     3 lots, N=>25     Q29194     0/80       130°C, 85%RH     3 lots, N=>25     Q29197     0/80       Vcc=5V, 96 hours     Q29192     0/80     Q3948     0/80       JA104     Q29192     0/80     Q3948     0/80       Cond C: -65°C to 150°C     3 lots, N=>25     Q29192     0/80       JA103     29500     0/80     Q30947     0/80       JA103     3 lots, N=>25     Q29193     0/80     Q30947     0/80       JA103     3 lots, N=>25     Q29193     0/80     Q29193     0/80       JA103     3 lots, N=>25     Q29605     0/80     Q30949     0/80       Codecate Environment Stress Tests - 8-SOIC     Q28932     0/80     Q28933     0/77       Vcc=5V, 96 hours     3 lots, N=>25     Q28937     0/80     Q30948     0/80       JA104     Q28934     0/80     Q28933     0/80     Q30947     0/80       JA103     Q28939     0/80	Test Condition     Qualification     Eat ID or Start     Fail/Pass or End     Notes       ccelerated Environment Stress Tests - 16-WB SOIC     JA110     3 lots, N=>25     Q29194     0/80     1       JA10     3 lots, N=>25     Q29197     0/80     1     Q30948     0/80     1, 2       JA104     Q30948     0/80     1, 2     Q30948     0/80     1, 2       JA104     Cond C: -65°C to 150°C     3 lots, N=>25     Q29195     0/80     1       Cond C: -65°C to 150°C     3 lots, N=>25     Q29195     0/80     1       JA103     Q29509     0/80     1     Q30947     0/80     1       JA103     Jots, N=>25     Q29196     0/80     1     Q30947     0/80     1       UA103     Jots, N=>25     Q29193     0/80     1     Q30949     0/80     1       UA103     Jots, N=>25     Q28932     0/80     1     Q30949     1       USCE     JA104     Q28938     0/80     1     Q30948     0/80     1  <	Test Condition     Qualification     Lot ID or Start     Fail/Pass or End     Notes     Summary       ccelerated Environment Stress Tests - 16-WB SOIC     JA110     3 lots, N=>25     Q29194     0/80     1     4 lots       JJA10     3 lots, N=>25     Q29197     0/80     1     4 lots       Vcc=5V, 96 hours     Q29197     0/80     1     4 lots       Q30948     0/80     1, 2     0/320     0/320       JA104     Q29192     0/80     1     4 lots       Cond C: -65°C to 150°C     3 lots, N=>25     Q29195     0/80     1     4 lots       JA103     Q29193     0/80     1     4 lots     0/320       JA103     Q29193     0/80     1     4 lots     0/320       Q30947     0/80     1     4 lots     0/320     Q30947       JA103     Q28932     0/80     1     0/320       Q28935     0/777     1     4 lots     0/320       JA104     Q28934     0/80     1     0/317

Approved by: Noel Arguello

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## Si8220 2.5A Driver New PI Qualification Report

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💕 W7101F1 Product Qualification Plan and Report 👘 Rev. E

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Part Rev D, N	Part Rev D, Vangard Fabrication, ASECL Assembly except as noted						
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	St at us
	lectrical Verification	-	-			1	
ESD-HB M	JA114	1 lot, N=>3	Q27578				2 kV
ESD-CDM	JC101 16-WBSOIC	1 lot, N=>3	Q27579				2.5 kV
ESD-CDM	JC101 16-NBSOIC	1 lot, N=>3	Q28071				2 kV
Latch Up	JESD78 ±200mA Overvoltage = 7.5V	1 lot, N=>6	Q27576 Q27575	85 C 25 C			Pass

Notes:

1. Parts are Pre-conditioned at MSL2A/260°C

2. New Polyimide material used

	This report applies to the following part numbers:							
S18220BB-D-IS S18220DD-D-IS	S18220CB-D-IS	Si8220DB-D-IS	Si8220BD-D-IS	Si8220CD-D-IS				

Approved by: Noel Arguello

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Appendix B

## Si8221 0.5A Driver New PI Qualification Report

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Part Rev D, V	Part Rev D, Vangard Fabrication, ASECL Assembly except as noted							
	Lot ID or   Fail/Pass or							
Test Name	Test Condition	Qualification	Start	End	Notes	Summary	St at us	
Test Group A - A	ccelerated Environment Stres:	s Tests - 8-SOIC						
HAST	JA110		Q28932	0/80	1			
	130°C,85%RH	3 lots, N=>25	Q28935	0/77	1	4 lots		
	Vcc=5V, 96 hours		Q28938	0/80	1	0/317		
			Q30948	0/80	1,2		Pass	
Temp Cycle	JA104		Q28934	0/80	1			
	Cond C: -65°C to 150°C	3 lots, N=>25	Q28937	0/80	1	3 lots		
	500 cycles		Q28940	0/78	1	0/238		
			Q30947	0/ 80	1		Pass	
HTSL	JA103		Q28933	0/80	1			
	175°C, 500hr	3 lots, N=>25	Q28936	0/80	1	3 lots		
			Q28939	0/80	1	0/240		
			Q30949	0/80	1,2		Pass	
Test Group B - A	ccelerated Lifetime Simulatio	n Tests						
HTOL	JA108		Q28439	0/79				
	125°C, Dynamic	3 lots, N=>77	Q28994	0/80		3 lots		
	Vcc=5V, 1000 hours		Q28438	0/80		0/239	Pass	
ELFR	JA108		Q27625	0/505				
	125°C, Dynamic	3 lots, N=>500	Q28329	0/800		5 lots		
	Vcc=5V, 48 hours		Q28330	0/800		0/3215		
			Q29430	0/305				
			Q30809	0/805	2		Pass	
Test Group E - El	lectrical Verification	1	1			1 1		
ESD-HBM	JA114							
		1 lot, N=>3	Q27578				2 kV	
ESD-CDM	JC101							
	16-NB SOIC	1 lot, N=>3	Q28071				2 kV	
Latch Up	JESD78		+					
	±200mA	1 lot, N=>6	Q27576	85 C			Pass	
	Overvoltage = 7.5V		-					
	Contractinge (19)		Q27575	25 C				

Notes:

1. Parts are Pre-conditioned at MSL2A/260°C

2. New Polyimide material used

This report applies to the following part numbers:						
Si8221CC-D-IS	Si8221DC-D-IS					
Approved by	y: Noel Arguello	1 of 1	Prepared on: 04-Apr-14			

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