Process Change Notice #1404092

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PCN Date: 4/9/2014	**Effective Date:** 7/14/2014	
Title: Transition to Rev D for Si823x		
Originator: Ashish Gokhale	**Phone:** 512 532 5379	**Dept:** Marketing
Customer Contact: Kathy Haggar	**Phone:** 512 532 5261	**Dept:** Sales

PCN Type:

☐ **Datasheet**	☐ **Foundry**	☐ **Packing**
☒ **Product Revision**	☐ **Assembly**	☐ **Labeling**
☐ **Discontinuance**	☐ **Test**	☐ **Other**

Last Order Date: Not Applicable

PCN 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 Si823x 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 Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at www.silabs.com

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.

Product Identification:

Old Product	New product	Old Product	New product
Si8230BB-B-IS	Si8230BB-D-IS	Si8233CB-C-IM	Si8233CB-D-IM
Si8231BB-B-IS	Si8231BB-D-IS	Si8233BB-C-IM	Si8233BB-D-IM
Si8232BB-B-IS	Si8232BB-D-IS	Si8233AB-C-IM	Si8233AB-D-IM
Si8234CB-C-IS	Si8234CB-D-IS	Si8234BB-C-IM	Si8234BB-D-IM
Si8233BB-C-IS	Si8233BB-D-IS	Si8234AB-C-IM	Si8234AB-D-IM
Si8234BB-C-IS	Si8234BB-D-IS	Si8235BB-C-IM	Si8235BB-D-IM
Si8235BB-C-IS	Si8235BB-D-IS	Si8235AB-C-IM	Si8235AB-D-IM
Si8230AB-B-IS	Si8230AB-D-IS	Si8236BA-C-IM	Si8236BA-D-IM
Si8231AB-B-IS	Si8231AB-D-IS	Si8236AA-C-IM	Si8236AA-D-IM
Si8232AB-B-IS	Si8232AB-D-IS	Si8230BD-B-IS	Si8230BD-D-IS
Si8233AB-C-IS	Si8233AB-D-IS	Si8231BD-B-IS	Si8231BD-D-IS
Si8234AB-C-IS	Si8234AB-D-IS	Si8232BD-B-IS	Si8232BD-D-IS
Si8235AB-C-IS	Si8235AB-D-IS	Si8233BD-C-IS	Si8233BD-D-IS
Si8230BB-B-IS1	Si8230BB-D-IS1	Si8234BD-C-IS	Si8234BD-D-IS
Si8231BB-B-IS1	Si8231BB-D-IS1	Si8235BD-C-IS	Si8235BD-D-IS
Si8232BB-B-IS1	Si8232BB-D-IS1	Si8230AD-B-IS	Si8230AD-D-IS
Si8233BB-C-IS1	Si8233BB-D-IS1	Si8231AD-B-IS	Si8231AD-D-IS
Si8235BB-C-IS1	Si8235BB-D-IS1	Si8232AD-B-IS	Si8232AD-D-IS
Si8235BA-C-IS1	Si8235BA-D-IS1	Si8233AD-C-IS	Si8233AD-D-IS
Si8230AB-B-IS1	Si8230AB-D-IS1	Si8234AD-C-IS	Si8234AD-D-IS
Si8231AB-B-IS1	Si8231AB-D-IS1	Si8235AD-C-IS	Si8235AD-D-IS
Si8232AB-B-IS1	Si8232AB-D-IS1	Si8237AB-B-IS1	Si8237AB-D-IS1
Si8233AB-C-IS1	Si8233AB-D-IS1	Si8237BB-B-IS1	Si8237BB-D-IS1
Si8234AB-C-IS1	Si8234AB-D-IS1	Si8238AB-C-IS1	Si8238AB-D-IS1
Si8235AB-C-IS1	Si8235AB-D-IS1	Si8238BB-C-IS1	Si8238BB-D-IS1
Si8237BD-B-IS	Si8237BD-D-IS	Si8237AD-B-IS	Si8237AD-D-IS
Si8238AD-C-IS	Si8238AD-D-IS	Si8238BD-C-IS	Si8238BD-D-IS

Last Date of Unchanged Product: 7/14/2014

Qualification Samples:

Available upon request. Please see your Silicon Labs sales representative to order samples. A list of Silicon Labs sales representatives is available at www.silabs.com.

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 www.silabs.com . **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: katherine.haggar@silabs.com**
Qualification Data: See Appendix A and B.

Appendix A

Si823x 0.5A Driver New PI Qualification Report

W7101F1 Product Qualification Plan and Report Rev. E

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**	**Status**
Test Group A - Accelerated Environment Stress Tests - 16-WBSOIC							
HAST	JA110		Q29577	0/80	1		
	130°C, 85%RH	3 lots, N=>25	Q29607	0/80	1	4 lots	
	Vcc=5V, 96 hours		Q29604	0/80	1	0/320	
			Q30951	0/80	1, 2		Pass
Temp Cycle	JA104		Q29579	0/80	1		
	Cond C: -65°C to 150°C	3 lots, N=>25	Q29609	0/80	1	4 lots	
	500 cycles		Q29606	0/80	1	0/320	
			Q30950	0/80	1, 2		Pass
HTSL	JA103		Q29578	0/80	1		
	175°C, 500hr	3 lots, N=>25	Q29608	0/80	1	4 lots	
			Q29605	0/80	1	0/320	
			Q30952	0/80	1, 2		Pass
Test Group A - Accelerated Environment Stress Tests - 16-NBSOIC							
HAST	JA110		Q28911	0/80	1		
	130°C, 85%RH	3 lots, N=>25	Q28920	0/80	1	4 lots	
	Vcc=5V, 96 hours		Q28923	0/80	1	0/320	
			Q30951	0/80	1, 2		Pass
Temp Cycle	JA104		Q29580	0/80	1		
	Cond C: -65°C to 150°C	3 lots, N=>25	Q28922	0/80	1	4 lots	
	500 cycles		Q28925	0/80	1	0/320	
			Q30950	0/80	1, 2		Pass
HTSL	JA103		Q28912	0/80	1		
	175°C, 500hr	3 lots, N=>25	Q28921	0/80	1	4 lots	
			Q28924	0/80	1	0/320	
			Q30952	0/80	1, 2		Pass
Test Group B - Accelerated Lifetime Simulation 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

Approved by: Noel Arguello 1 of 2 Prepared on: 04-Apr-14

Si823x 0.5A Driver New PI Qualification Report

W7101F1 Product Qualification Plan and Report Rev. E

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**	**Status**
ELFR	JA108 125°C, Dynamic Vcc=5V, 48 hours	3 lots, N=>500	Q27625 Q28329 Q28330 Q29430 Q30809	0/505 0/800 0/800 0/305 0/805	2	5 lots 0/3215	Pass
Test Group E - Electrical Verification							
ESD-HBM	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	Q28031				2.5 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:				
Si8230AB-D-IS	Si8230AB-D-IS1	Si8230AD-D-IS	Si8230BB-D-IS	Si8230BB-D-IS1
Si8230BD-D-IS	Si8231AB-D-IS	Si8231AB-D-IS1	Si8231AD-D-IS	Si8231BB-D-IS
Si8231BB-D-IS1	Si8231BD-D-IS	Si8232AB-D-IS	Si8232AB-D-IS1	Si8232AD-D-IS
Si8232BB-D-IS	Si8232BB-D-IS1	Si8232BD-D-IS	Si8237AB-D-IS1	Si8237AD-D-IS
Si8237BB-D-IS1	Si8237BD-D-IS			

Approved by: Noel Arguello

Prepared on: 04-Apr-14

Appendix B

Si823x 4A Driver New PI Qualification Report

W7101F1 Product Qualification Plan and Report Rev. E

Part Rev D, Vangard Fabrication, ASE Assembly except as noted							
Test Name	**Test Condition**	**Qualification**	**Lot ID or Start**	**Fail/Pass or End**	**Notes**	**Summary**	**Status**
Test Group A - Accelerated Environment Stress Tests - 16-WBSOIC (ASECL)							
HAST	JA110		Q29577	0/80	1		
	130°C, 85%RH	3 lots, N=>25	Q29607	0/80	1	4 lots	
	Vcc=5V, 96 hours		Q29604	0/80	1	0/320	
			Q30948	0/80	1, 3		Pass
Temp Cycle	JA104		Q29579	0/80	1		
	Cond C: -65°C to 150°C	3 lots, N=>25	Q29609	0/80	1	4 lots	
	500 cycles		Q29606	0/80	1	0/320	
			Q30947	0/80	1, 3		Pass
HTSL	JA103		Q29578	0/80	1		
	175°C,500hr	3 lots, N=>25	Q29608	0/80	1	4 lots	
			Q29605	0/80	1	0/320	
			Q30949	0/80	1, 3		Pass
Test Group A - Accelerated Environment Stress Tests - 16-NBSOIC (ASECL)							
HAST	JA110		Q28911	0/80	1		
	130°C, 85%RH	3 lots, N=>25	Q28920	0/80	1	4 lots	
	Vcc=5V, 96 hours		Q28923	0/80	1	0/320	
			Q30948	0/80	1, 3		Pass
Temp Cycle	JA104		Q29580	0/80	1		
	Cond C: -65°C to 150°C	3 lots, N=>25	Q28922	0/80	1	4 lots	
	500 cycles		Q28925	0/80	1	0/320	
			Q30947	0/80	1, 3		Pass
HTSL	JA103		Q28912	0/80	1		
	175°C, 500hr	3 lots, N=>25	Q28921	0/80	1	4 lots	
			Q28924	0/80	1	0/320	
			Q30949	0/80	1, 3		Pass

Approved by: Noel Arguello 1 of 3 Prepared on: 04-Apr-14

Si823x 4A Driver New PI Qualification Report

W7101F1 Product Qualification Plan and Report Rev. E

Part Rev D, Vangard Fabrication, ASE Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A - Accelerated Environment Stress Tests - 14-LGA (ASEKr)							
HAST	JA110		Q27993	0/29	2		
	130°C, 85%RH	3 lots, N=>25	Q28231	0/30	2	4 lots	
	Vcc=5V, 96 hours		Q28379	0/30	2	0/118	
			Q28238	0/29	2, 3		Pass
Temp Cycle	JA104		Q27992	0/30	2		
	Cond C: -65°C to 150°C	3 lots, N=>25	Q28229	0/30	2	4 lots	
	500 cycles		Q28376	0/30	2	0/120	
			Q28236	0/30	2, 3		Pass
HTSL	JA103		Q27991	0/30	2		
	150°C, 1000hr	3 lots, N=>25	Q28232	0/30	2	4 lots	
			Q28378	0/30	2	0/120	
			Q28241	0/30	2, 3		Pass
Test Group A - Accelerated Environment Stress Tests - 14-eLGA (ASEKr)							
HAST	JA110		Q27996	0/30	2		
	130°C, 85%RH	3 lots, N=>25	Q28366	0/29	2	3 lots	Pass
	Vcc=5V, 96 hours		Q28238	0/29	2, 3	0/88	
Temp Cycle	JA104		Q27994	0/30	2		
	Cond C: -65°C to 150°C	3 lots, N=>25	Q28369	0/29	2	3 lots	
	500 cycles		Q28236	0/30	2, 3	0/89	Pass
HTSL	JA103		Q27995	0/30	2		
	150°C, 1000hr	3 lots, N=>25	Q28367	0/30	2	3 lots	
			Q28241	0/30	2, 3	0/90	Pass
Test Group B - Accelerated Lifetime Simulation Tests							
HTOL	JA108		Q27679	0/79			
	125°C, Dynamic	3 lots, N=>77	Q28440	0/80		3 lots	
	Vcc=5V, 1000 hours		Q28441	0/80		0/239	Pass
ELFR	JA108		Q27572	0/510			
	125°C, Dynamic	3 lots, N=>500	Q28098	0/812		5 lots	
	Vcc=5V, 48 hours		Q28208	0/800		0/3226	
			Q28959	0/299			
			Q30807	0/805	3		Pass
Test Group E - Electrical Verification							
ESD-HBM	JA114	1 lot, N=>3	Q27578				2 kV
ESD-MM	JA115	1 lot, N=>3	Q27577				200 V

Approved by: Noel Arguello 2 of 3 Prepared on: 04-Apr-14

Si823x 4A Driver New PI Qualification Report

W7101F1 Product Qualification Plan and Report Rev. E

Part Rev D, Vangard Fabrication, ASE Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
ESD-CDM	JC101 16-WBSOIC	1 lot, N=>3	Q27579				2.5 kV
ESD-CDM	JC101 16-NBSOIC	1 lot, N=>3	Q28031				2.5 kV
ESD-CDM	JC101 14-LGA	1 lot, N=>3	Q27765				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
1. Parts are Pre-conditioned at MSL3/260°C
3. New Polyimide material used

This report applies to the following part numbers:

Si8233AB-D-IM	Si8233AB-D-IS	Si8233AB-D-IS1	Si8233AD-D-IS	Si8233BB-D-IM
Si8233BB-D-IS	Si8233BB-D-IS1	Si8233BD-D-IS	Si8233CB-D-IM	Si8234AB-D-IM
Si8234AB-D-IS	Si8234AB-D-IS1	Si8234AD-D-IS	Si8234BB-D-IM	Si8234BB-D-IS
Si8234BB-D-IS1	Si8234BD-D-IS	Si8234CB-D-IS	Si8235AB-D-IM	Si8235AB-D-IS
Si8235AB-D-IS1	Si8235AD-D-IS	Si8235BA-D-IS1	Si8235BB-D-IM	Si8235BB-D-IS
Si8235BB-D-IS1	Si8235BD-D-IS	Si8236AA-D-IM	Si8236BA-D-IM	Si8238AB-D-IS1
Si8238AD-D-IS	Si8238BB-D-IS1	Si8238BD-D-IS		

Approved by: Noel Arguello

Prepared on: 04-Apr-14

