



Process Change Notice #1404093

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PCN Date: 4/9/2014		Effective Date: 7/14/2014	
Title: Transition to Rev D for Si822x			
Originator: Ashish Gokhale		Phone: 512 532 5379	Dept: Marketing
Customer Contact: Kathy Haggar		Phone: 512 532 5261	Dept: Sales
PCN Type:			
<input type="checkbox"/> Datasheet	<input type="checkbox"/> Foundry	<input type="checkbox"/> Packing	
<input checked="" type="checkbox"/> Product Revision	<input type="checkbox"/> Assembly	<input type="checkbox"/> Labeling	
<input type="checkbox"/> Discontinuance	<input type="checkbox"/> Test	<input type="checkbox"/> Other	
Last Order Date: Not Applicable			
PCN Details			
Description of Change:			
<p>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.</p> <p>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 www.silabs.com.</p>			
Reason for Change:			
<p>The previous polyimide has been discontinued and replaced with a revised polyimide by the current supplier.</p>			
Impact on Form, Fit, Function, Quality, Reliability:			
<p>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.</p>			

Appendix A

Si8220 2.5A Driver New PI Qualification Report



W7101F1 Product Qualification Plan and Report Rev. E

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Part Rev D, Vanguard 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 130 °C, 85%RH Vcc=5V, 96 hours	3 lots, N=>25	Q29194	0/80	1	4 lots 0/320	Pass
			Q29197	0/80	1		
			Q29509	0/80	1		
			Q30948	0/80	1, 2		
Temp Cycle	JA104 Cond C: -65°C to 150 °C 500 cycles	3 lots, N=>25	Q29192	0/80	1	4 lots 0/320	Pass
			Q29195	0/80	1		
			Q29510	0/80	1		
			Q30947	0/80	1, 2		
HTSL	JA103 175 °C, 500hr	3 lots, N=>25	Q29193	0/80	1	4 lots 0/320	Pass
			Q29196	0/80	1		
			Q29605	0/80	1		
			Q30949	0/80	1, 2		
Test Group A - Accelerated Environment Stress Tests - 8-SOIC							
HAST	JA110 130 °C, 85%RH Vcc=5V, 96 hours	3 lots, N=>25	Q28932	0/80	1	4 lots 0/317	Pass
			Q28935	0/77	1		
			Q28938	0/80	1		
			Q30948	0/80	1, 2		
Temp Cycle	JA104 Cond C: -65°C to 150 °C 500 cycles	3 lots, N=>25	Q28934	0/80	1	3 lots 0/238	Pass
			Q28937	0/80	1		
			Q28940	0/78	1		
			Q30947	0/80	1		
HTSL	JA103 175 °C, 500hr	3 lots, N=>25	Q28933	0/80	1	3 lots 0/240	Pass
			Q28936	0/80	1		
			Q28939	0/80	1		
			Q30949	0/80	1, 2		
Test Group B - Accelerated Lifetime Simulation Tests							
HTOL	JA108 125 °C, Dynamic Vcc=5V, 1000 hours	3 lots, N=>77	Q27679	0/79		3 lots 0/239	Pass
			Q28440	0/80			
			Q28441	0/80			
ELFR	JA108 125 °C, Dynamic Vcc=5V, 48 hours	3 lots, N=>500	Q27572	0/510		5 lots 0/3226	Pass
			Q28098	0/812			
			Q28208	0/800			
			Q28959	0/299			
			Q30807	0/805	2		

Si8220 2.5A Driver New PI Qualification Report



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Part Rev D, Vanguard Fabrication, ASECL Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
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	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:				
Si8220BB-D-IS	Si8220CB-D-IS	Si8220DB-D-IS	Si8220BD-D-IS	Si8220CD-D-IS
Si8220DD-D-IS				

Appendix B

Si8221 0.5A Driver New PI Qualification Report



W7101F1 Product Qualification Plan and Report Rev. E

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Part Rev D, Vanguard 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 - 8-SOIC							
HAST	JA110 130°C, 85%RH Vcc=5V, 96 hours	3 lots, N=>25	Q28932	0/80	1	4 lots 0/317	Pass
			Q28935	0/77	1		
			Q28938	0/80	1		
			Q30948	0/80	1, 2		
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>25	Q28934	0/80	1	3 lots 0/238	Pass
			Q28937	0/80	1		
			Q28940	0/78	1		
			Q30947	0/80	1		
HTSL	JA103 175°C, 500hr	3 lots, N=>25	Q28933	0/80	1	3 lots 0/240	Pass
			Q28936	0/80	1		
			Q28939	0/80	1		
			Q30949	0/80	1, 2		
Test Group B - Accelerated Lifetime Simulation Tests							
HTOL	JA108 125°C, Dynamic Vcc=5V, 1000 hours	3 lots, N=>77	Q28439	0/79		3 lots 0/239	Pass
			Q28994	0/80			
			Q28438	0/80			
ELFR	JA108 125°C, Dynamic Vcc=5V, 48 hours	3 lots, N=>500	Q27625	0/505		5 lots 0/3215	Pass
			Q28329	0/800			
			Q28330	0/800			
			Q29430	0/305			
Q30809	0/805	2					
Test Group E - Electrical Verification							
ESD-HBM	JA114	1 lot, N=>3	Q27578				2 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	85 C			Pass
			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: Noel Arguello

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Prepared on: 04-Apr-14