



Process Change Notice #1703025

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PCN Issue Date: 3/2/2017		Effective Date: 6/7/2017	
Title: Si838x OTP Robustness Enhancement			
PCN Type:			
<input type="checkbox"/> Datasheet	<input checked="" type="checkbox"/> Foundry	<input type="checkbox"/> Packing	
<input type="checkbox"/> Product Revision	<input type="checkbox"/> Assembly	<input type="checkbox"/> Labeling	
<input type="checkbox"/> Discontinuance	<input checked="" type="checkbox"/> Test	<input type="checkbox"/> Other	
Last Order Date: NA			
PCN Details			
Description of Change: Silicon Labs is pleased to announce an enhancement to the robustness of the OTP (One Time Programming) circuit utilized in this product. There are no changes made in the logic and/or any functional parts of the product die.			
Reason for Change: The physical layout of Si838x OTP circuit was changed to improve robustness.			
Impact on Form, Fit, Function, Quality, Reliability: There is no impact on form, fit and Silicon Labs is pleased to announce an enhancement to the robustness of the OTP (One Time Programming) circuit utilized in this product. There are no changes made in the logic and/or any functional parts of the product die. All quality and reliability checks have been done and show no impact.			
Product Identification:			
SI8380S-IU	SI8380S-IUR		
SI8380P-IU	SI8380P-IUR		
SI8382P-IU	SI8382P-IUR		
SI8384P-IU	SI8384P-IUR		
SI8388P-IU	SI8388P-IUR		
SI8380PS-IU	SI8380PS-IUR		
SI8382PS-IU	SI8382PS-IUR		
SI8384PS-IU	SI8384PS-IUR		
SI8380PM-IU	SI8380PM-IUR		
SI8382PM-IU	SI8382PM-IUR		
SI8384PM-IU	SI8384PM-IUR		
SI8380PF-IU	SI8380PF-IUR		
SI8382PF-IU	SI8382PF-IUR		
SI8384PF-IU	SI8384PF-IUR		
Last Date of Unchanged Product: 6/7/2017			
Qualification Samples: Samples available upon request			



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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.hagggar@silabs.com

Qualification Data:

Please see attached qualification report.

Appendix

Si838x 20-Pin QSOP AEC-Q100 Qualification Report



W7101F1 - Product Qualification Report Record Rev. H

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Part Rev A, Vanguard Fabrication, UTACTH 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							
HAST	JA110 130°C, 85%RH Vcc=5.5V, 96 hours	3 lots, N=>77	Q038511	0/85	1	3 lots 0/255	Pass
			Q039657	0/85	1		
			Q039656	0/85	1		
UHAST	JA110 130°C, 85%RH Vcc=5.5V, 96 hours	3 lots, N=>77	Q038513	0/85	1	3 lots 0/255	Pass
			Q039659	0/85	1		
			Q039658	0/85	1		
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q038407	0/85	1	3 lots 0/255	Pass
			Q039660	0/85	1		
			Q039661	0/85	1		
HTSL	JA103 150°C, 1000hr	1 lot, N=>45	Q038154	0/50	1	1 lots 0/50	Pass
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	JA108 T _j ≥ 125°C, Dynamic Vcc=5.5V, 1000 hours	3 lots, N=>77	Q038519	0/100		3 lots 0/281	Pass
			Q039664	0/81			
			Q039665	0/100			
ELFR	AEC-Q100-008 T _j ≥ 125°C, Dynamic Vcc=5.5V, 48 hours	3 lots, N=>800	Q038177	0/822		3 lots 0/2461	Pass
			Q039663	0/819			
			Q039662	0/820			
Test Group C – Package Assembly Integrity Tests							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	718170	0/6		3 lots 0/18	Pass
			721740	0/6			
			721741	0/6			
Wire Bond Pull	M-STD-883 Performed post-TC	5 units, N=>30	718170	0/6		3 lots 0/18	Pass
			721740	0/6			
			721741	0/6			
Physical Dimensions	JB100	3 lots, N=>10	718170	0/30		3 lots 0/90	Pass
			721740	0/30			
			721741	0/30			
Solderability	JB102	1 lot, N=>15	718170	0/10		3 lots 0/30	Pass
			721740	0/10			
			721741	0/10			

Si838x 20-Pin QSOP AEC-Q100 Qualification Report



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Part Rev A, Vanguard Fabrication, UTACTH 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	AEC-Q100-002	1 lot, N=>3	Q037537				Class 3A
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q037536				Class C5
Latch Up	AEC-Q100-004 ±200mA Overvoltage = 8.25V	1 lot, N=>6	Q37539	125 °C			Pass

Notes:

1. Parts are Pre-conditioned at MSL2/260°C

This report applies to the following part numbers:				
SI8380P-IU/R	SI8380PF-IU/R	SI8380PM-IU/R	SI8380PS-IU/R	SI8380S-IU/R
SI8382P-IU/R	SI8382PF-IU/R	SI8382PM-IU/R	SI8382PS-IU/R	SI8384P-IU/R
SI8384PF-IU/R	SI8384PM-IU/R	SI8384PS-IU/R	SI8388P-IU/R	