



180831368 Si838x Product Revision For The Low Pass Debounce Filter Operation

PRCN Issue Date: 8/31/2018

Effective Date: 12/6/2018

PCN Type: Product Revision

Description of Change

Silicon Labs is announcing a new revision to the Si838x product family. The revision corrects an issue with the low pass debounce filter (available on a subset of products) where periodic input signals may cause the filter to malfunction. The new revision behaves as defined in the current data sheet.

The new revision is indicated on the Si838x package by the number 1823 or higher in the first four digits of the line 2 marking. Consult section 9 of the Si838x datasheet for top marking details.

Reason for Change

To correct operation of the low pass debounce filter on select Si838x OPNs to match the data sheet description.

Impact on Form, Fit, Function, Quality, Reliability

The debounce filter function has changed to match the published data sheet. No other changes to functionality were made.

Product Identification

Si8380S-IU
Si8380S-IUR
Si8380PS-IU
Si8380PS-IUR
Si8380PM-IU
Si8380PM-IUR
Si8380PF-IU
Si8380PF-IUR
Si8382PS-IU
Si8382PS-IUR
Si8382PM-IU
Si8382PM-IUR
Si8382PF-IU
Si8382PF-IUR
Si8384PS-IU
Si8384PS-IUR
Si8384PM-IU
Si8384PM-IUR
Si8384PF-IU
Si8384PF-IUR

Last Date of Unchanged Product: 12/6/2018

Qualification Samples

Available Upon Request.

Customer Response

Lack of acknowledgment of the PCN within 30 days constitutes acceptance of the change, Ref. JEDEC-J-STD-046.

To request further data or inquire about this notification, please contact your Silicon Labs sales representative. A list of Silicon Labs sales representatives is available at <http://www.silabs.com>.

Customers may approve early PCN acceptance by emailing approval, along with PCN # to PCNEarlyAcceptance@silabs.com

User Registration

Register today to create your account on Silabs.com. Your personalized profile allows you to receive technical document updates, new product announcements, "how-to" and design documents, product change notices (PCN) and other valuable content available only to registered users. <http://www.silabs.com/profile>

Qualification Data

Please see the below Qualification Report.

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, 2	3 lots 0/255	Pass
			Q039657	0/85	1, 2		
			Q039656	0/85	1, 2		
UHAST	JA110 130°C, 85%RH Vcc=5.5V, 96 hours	3 lots, N=>77	Q038513	0/85	1, 2	3 lots 0/255	Pass
			Q039659	0/85	1, 2		
			Q039658	0/85	1, 2		
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q038407	0/85	1, 2	3 lots 0/255	Pass
			Q039660	0/85	1, 2		
			Q039661	0/85	1, 2		
HTSL	JA103 150°C, 1000hr	1 lot, N=>45	Q038154	0/50	1, 2	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	3 lots 0/281	Pass
			Q039664	0/81	3		
			Q039665	0/100	3		
ELFR	AEC-Q100-008 T _j ≥ 125°C, Dynamic Vcc=5.5V, 48 hours	3 lots, N=>800	Q038177	0/822	3	3 lots 0/2459	Pass
			Q039663	0/819	3		
			Q043137	0/818			
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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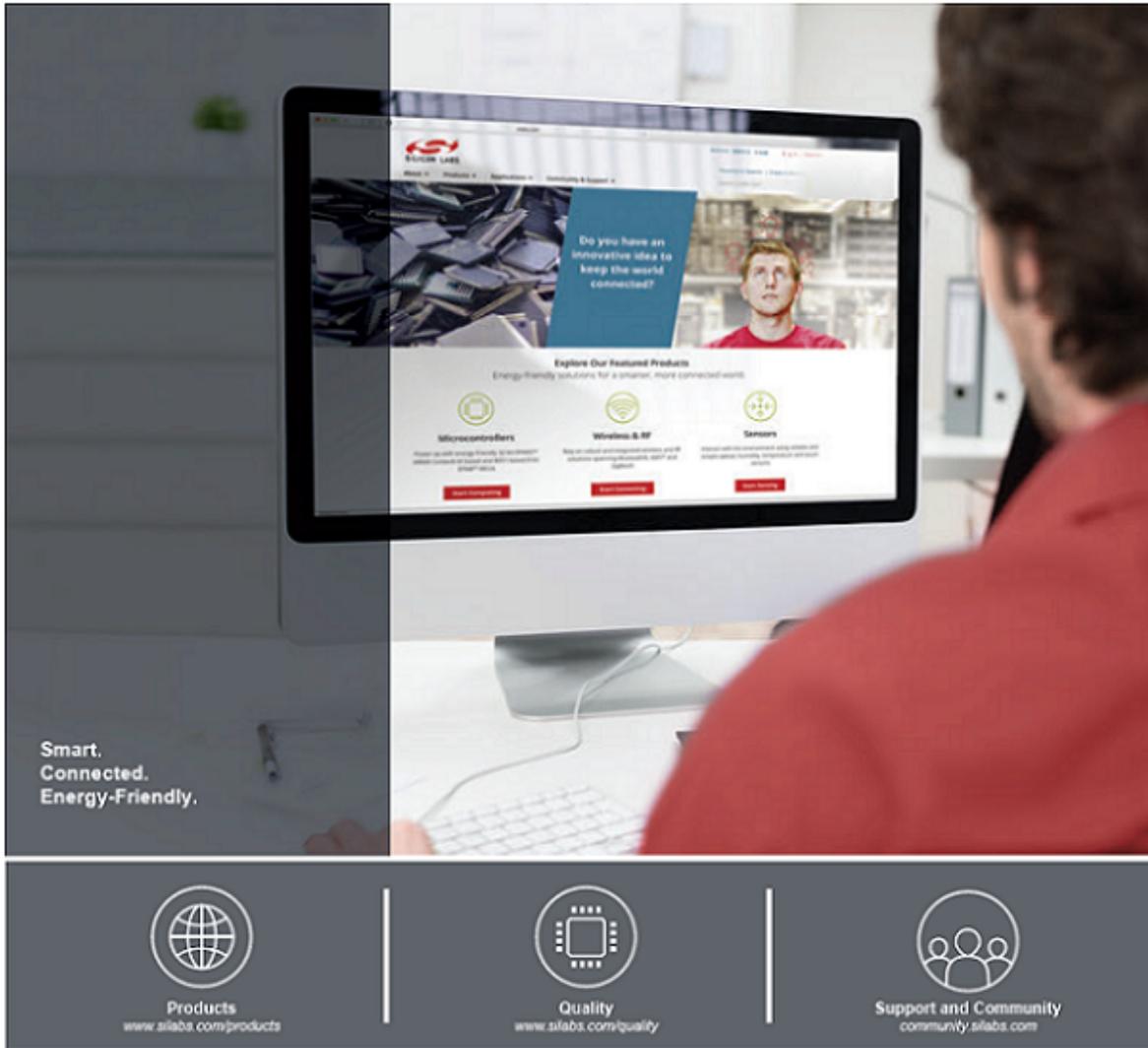
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Part Rev A, Vanguard Fabrication, UTACTH Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group E – Electrical Verification							
ESD-HBM	AEC-Q100-002	1 lot, N=>3	Q043138				Class 3A
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q043139				Class C5
Latch Up	AEC-Q100-004 ±200mA Overvoltage = 8.25V	1 lot, N=>6	Q043140	125 °C			Pass

Notes:

1. Parts are Pre-conditioned at MSL2/260°C
2. Leveraged package family qualification data
3. Leveraged die family qualification data

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	



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