



171117179 Assembly Site Addition (UTL3)

PCN Issue Date: 11/17/2017

Effective Date: 2/22/2018

PCN Type: Assembly

Description of Change

Silicon Labs is pleased to announce the successful qualification of UTAC Thailand (UTL3) as an additional Assembly site for the part numbers in the product identification below. UTL is an existing Assembly site for Silicon Labs, and is certified to ISO9001, ISO14001 and ISO/TS16949.

UTL 3 address:
UTAC Thai Limited (UTL3)
73 Moo5, Wellgrow Industrial Estate
Bangsamak, Bangpakong,
Chachoengsao, 24180, Thailand

As of the effective date of the PCN, Silicon Labs may assemble from either of the qualified Assembly sites.

Reason for Change

The additional test location will provide additional capacity for supply assurance.

Impact on Form, Fit, Function, Quality, Reliability

There is no impact on form, fit, function, quality, and reliability. The devices assembled and tested at UTAC will comply with Silicon Labs' relevant datasheets and quality levels.

Product Identification

Existing Part #
SI51214-A11AFM
SI51214-A1FAGM
SI51214-A01AFM
SL16010DC
SL16020DC
SI52111-B3-GM2
SI52111-B5-GM2
SI52112-A1-GM2
SI52112-B3-GM2
SI52112-B3ZM21
SI52131-A11AGM
SI52142-A01AGM
SI52143-A01AGM
SI52144-A01AGM
SI52144-A14AGM
SI52161-A11AGM
SI53152-A01AGM
SI53154-A01AGM
SI53154-A11AGM
SL28EB717ALI
SL28PCIE19ALI
SL28EB731ALC
SI52138-A16AGM
SI52138-A16BGM
SI52138-A17AGM
SI52138-A18AGM

SI52147-A01AGM
SI52147-A11BGM
SI52147-A13BGM
SL28610BLC
SL28610BLI
SI53159-A01AGM
SI51214-A11AFMR
SI51214-A1FAGMR
SI51214-A01AFMR
SL16010DCT
SL16020DCT
SI52111-B3-GM2R
SI52111-B5-GM2R
SI52112-A1-GM2R
SI52112-B3-GM2R
SI52112-B3ZM21R
SI52131-A11AGMR
SI52142-A01AGMR
SI52143-A01AGMR
SI52144-A01AGMR
SI52144-A14AGMR
SI52161-A11AGMR
SI53152-A01AGMR
SI53154-A01AGMR
SI53154-A11AGMR
SL28EB717ALIT
SL28PCIE19ALIT
SL28EB731ALCT
SI52138-A16AGMR
SI52138-A16BGMR
SI52138-A17AGMR
SI52138-A18AGMR
SI52147-A01AGMR
SI52147-A11BGMR
SI52147-A13BGMR
SL28610BLCT
SL28610BLIT
SI53159-A01AGMR

Last Date of Unchanged Product: 2/22/2018

Qualification Samples

Samples available upon request.

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 <http://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: 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 below qualification report.

SL28xxx, Si52146, Si53156 Qualification Report



W7101F1 - Product Qualification Report Record Rev. 1

SILICON LABS The information contained in this document is PROPRIETARY to Silicon Laboratories, Inc. and shall not be reproduced or used in part or whole without Silicon Laboratories' written consent. The document is uncontrolled if printed or electronically saved.

Part Rev A, GFSG Fabrication, UTL 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=3.465V, 96 hours	3 lots, N=>25	Q039516	0/30	3, 4	3 lots 0/90	Pass
			Q039546	0/30	3, 4		
			Q039547	0/30	3, 4		
UHAST	JA118 130°C, 85%RH 96 hours	1 lots, N=>25	Q042087	0/77	4	1 lots 0/77	Pass
Temp Cycle	JA104 Cond C: -85°C to 150°C 500 cycles	3 lots, N=>25	Q039713	0/50	1, 3	3 lots 0/177	Pass
			Q039714	0/50	1, 3		
			Q042069	0/77	4		
HTSL	JA103 150°C, 1000hr	3 lots, N=>25	Q039519	0/30	3, 4	3 lots 0/90	Pass
			Q039538	0/30	3, 4		
			Q039539	0/30	3, 4		
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	JA108 T _j ≥ 125°C, Dynamic Vcc=5V, 1000 hours	3 lots, N=>77	Q031806	0/80	2	3 lots 0/240	Pass
			RDR#10-32	0/80	2		
			Q033050	0/80	2		
ELFR	JA108 T _j ≥ 125°C, Dynamic Vcc=5V, 48 hours	3 lots, N=>500	Q031807	0/500	2	3 lots 0/1500	Pass
			Q033051	0/500	2		
			Q033049	0/500	2		
Test Group E – Electrical Verification							
ESD-HBM	JS-001	1 lot, N=>3	Q033893		2	2 kV	Class 2
ESD-CDM	JS-002	1 lot, N=>3	Q035193		2	1000 V	Class C3
Latch Up	JESD78 ±200mA Overvoltage = 8.25V	1 lot, N=>3	Q033562	90 °C	2		Pass

Part Rev A, GFSG Fabrication, UTL Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status

Notes:

1. Parts are Pre-conditioned at MSL1/260°C
2. Leveraged die family qualification data
3. Leveraged package family qualification data
4. Parts are Pre-conditioned at MSL2/260°C

This report applies to the following part numbers:				
Si52146-A01AGM	Si52146-A01AGMR	Si53156-A01AGM	Si53156-A01AGMR	SL28748ELC
SL28748ELCT	SL28748ELI	SL28748ELIT	SL28EB725ALI	SL28EB725ALIT
SL28EB745ALI	SL28EB745ALIT	SL28PCIE06ALC	SL28PCIE06ALCT	SL28PCIE14ALC
SL28PCIE14ALCT	SL28PCIE14ALI	SL28PCIE14ALIT	SL28PCIE25ALC	SL28PCIE25ALCT
SL28PCIE25ALI	SL28PCIE25ALIT	SL28PCIE26ALC	SL28PCIE26ALCT	SL28PCIE26ALI
SL28PCIE26ALIT				

Si51214 6-TDFN 1.2 x 1.4 mm Qualification Report



W7101F1 Product Qualification Plan and Report Rev. D

The information contained in this document is PROPRIETARY to Silicon Laboratories, Inc. and shall not be reproduced or used in part or whole without Silicon Laboratories' written consent. The document is uncontrolled if printed or electronically saved.

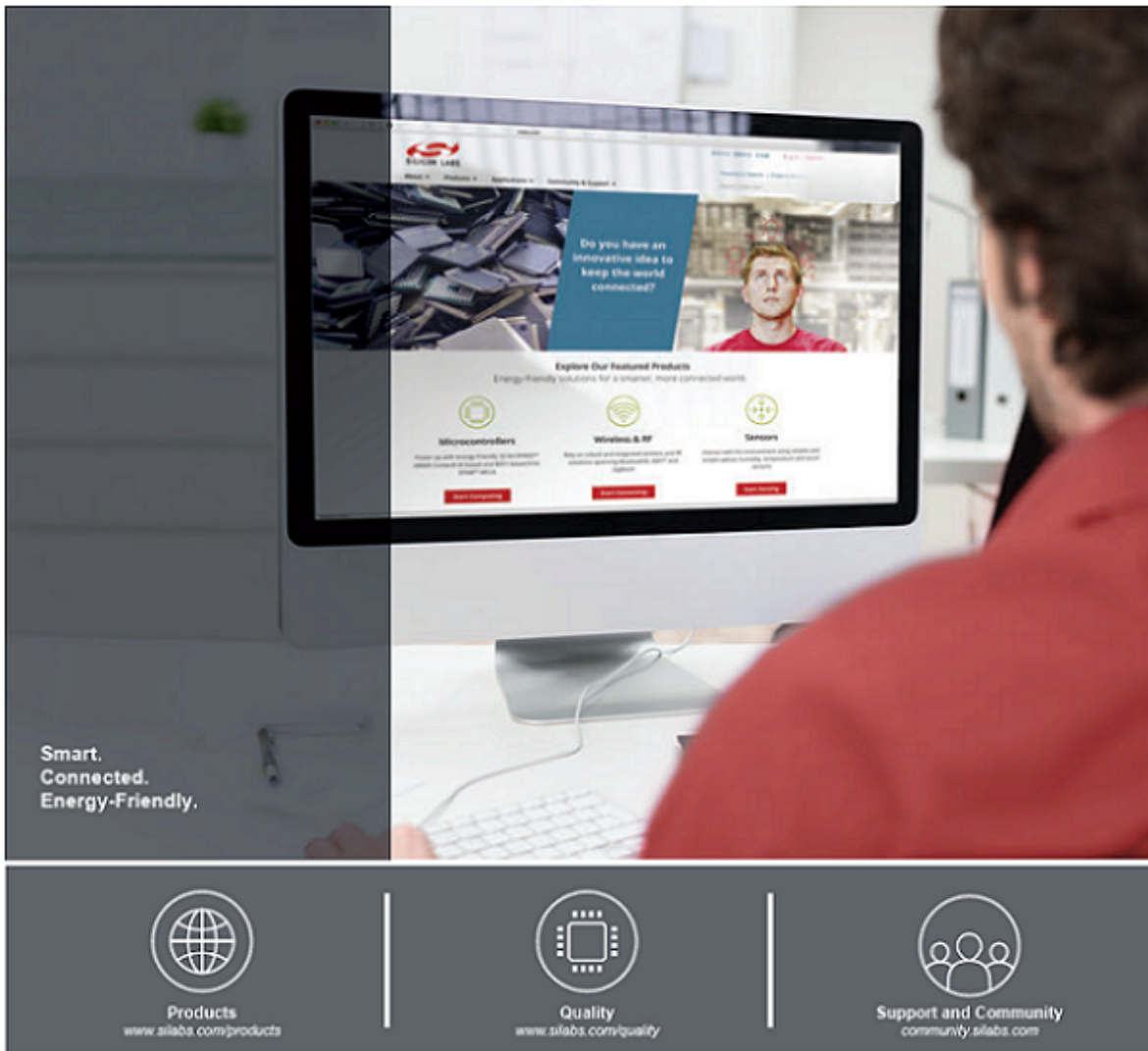
Part Rev A, Grace Fabrication, UTACTH Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A - Accelerated Environment Stress Tests							
HAST	JA110 130°C, 85%RH Voc=3.63V, 96 hours	3 lots, N=25	Q33442	0/25	1, 2		
			Q33446	0/25	1, 2	3 lots	
			Q33450	0/25	1, 2	0/75	Pass
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=25	Q32746	0/25	1, 2		
			Q32747	0/25	1, 2	3 lots	
			Q41976	0/77	1	0/127	Pass
HTSL	JA103 150°C, 1000hr	3 lots, N=25	Q33443	0/30	1, 2		
			Q33447	0/30	1, 2	3 lots	
			Q33451	0/30	1, 2	0/90	Pass
Test Group B - Accelerated Lifetime Simulation Tests							
HTOL	JA108 125°C, Dynamic Voc=3.8V, 1000 hours	3 lots, N=77	G0092A	0/80	3		
			Q31686	0/80	3	3 lots	
			Q31687	0/80	3	0/240	Pass
ELFR	JA108 125°C, Dynamic Voc=3.8V, 48 hours	3 lots, N=500	Q31684	0/500	3		
			Q31685	0/500	3	3 lots	
			Q32305	0/500	3	0/1500	Pass
Test Group C - Package Assembly Integrity Tests							
Wire Bond Shear	JB116	5 units, N=30	559924.1	0/5			
			559925.1	0/5		3 lots	
			559926.1	0/5		0/15	Pass
Wire Bond Pull	M2011	5 units, N=30	559924.1	0/5			
			559925.1	0/5		3 lots	
			559926.1	0/5		0/15	Pass
Physical Dimensions	JB100	3 lots, N=10	559924.1	0/30			
			559925.1	0/30		3 lots	
			559926.1	0/30		0/90	Pass
Solderability	JB102	3 lots, 15 leads	559924.1	0/10			
			559925.1	0/10		3 lots	
			559926.1	0/10		0/30	Pass
Test Group E - Electrical Verification							
ESD-HBM	JA114 Passes up to 4kV	1 lot, N=3	G0092A	0/3		1 lots 0/3	Pass
ESD-MM	JA115 Passes up to 200V	1 lot, N=3	G0092A	0/3		1 lots 0/3	Pass
ESD-CDM	JC101 Passes up to 2kV	1 lot, N=3	Q31706	0/3		1 lots 0/3	Pass

Part Rev A, Grace Fabrication, UTACTH Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Latch Up	JESD78 ±200mA	1 lot, N=6	G0092A	0/6		1 lots 0/6	Pass

Notes:

1. Devices subjected to moisture preconditioning at MSL1@260°C.
2. Leveraged package family data from Si5121X qualification
3. Leveraged die family data from Si5121X qualification (Assembled at SPEL)

Qualification Family Part Numbers				
Si51214-AxxAFM	Si51214-AxxAFMR	Si51214-AxxAGM	Si51214-AxxAGMR	Si51214-AxxBFM
Si51214-AxxBFMR	Si51214-AxxBGM	Si51214-AxxBGR	Si51214-A1FAGM	Si51214-A1FAGMR



Disclaimer

Silicon Labs intends to provide customers with the latest, accurate, and in-depth documentation of all peripherals and modules available for system and software implementers using or intending to use the Silicon Labs products. Characterization data, available modules and peripherals, memory sizes and memory addresses refer to each specific device, and "Typical" parameters provided can and do vary in different applications. Application examples described herein are for illustrative purposes only. Silicon Labs reserves the right to make changes without further notice and limitation to product information, specifications, and descriptions herein, and does not give warranties as to the accuracy or completeness of the included information. Silicon Labs shall have no liability for the consequences of use of the information supplied herein. This document does not imply or express copyright licenses granted hereunder to design or fabricate any integrated circuits. The products are not designed or authorized to be used within any Life Support System without the specific written consent of Silicon Labs. A "Life Support System" is any product or system intended to support or sustain life and/or health, which, if it fails, can be reasonably expected to result in significant personal injury or death. Silicon Labs products are not designed or authorized for military applications. Silicon Labs products shall under no circumstances be used in weapons of mass destruction including (but not limited to) nuclear, biological or chemical weapons, or missiles capable of delivering such weapons.

Trademark Information

Silicon Laboratories Inc.®, Silicon Laboratories®, Silicon Labs®, SiLabs® and the Silicon Labs logo®, Bluegiga®, Bluegiga Logo®, Clockbuilder®, CMEMS®, DSPLL®, EFM®, EFM32®, EFR, Ember®, Energy Micro, Energy Micro logo and combinations thereof, "the world's most energy friendly microcontrollers", Ember®, EZLink®, EZRadio®, EZRadioPRO®, Gecko®, ISModem®, Micrium, Precision32®, ProSLIC®, Simplicity Studio®, SiPHY®, Telegesis, the Telegesis Logo®, USBXpress®, Zentri and others are trademarks or registered trademarks of Silicon Labs. ARM, CORTEX, Cortex-M3 and THUMB are trademarks or registered trademarks of ARM Holdings. Keil is a registered trademark of ARM Limited. All other products or brand names mentioned herein are trademarks of their respective holders.



Silicon Laboratories Inc.
400 West Cesar Chavez
Austin, TX 78701

<http://www.silabs.com>