



# 171106150 Si823x Lower Prop Delay & UTAC 16 WB SOIC Assembly Qualification

**PCN Issue Date:** 11/6/2017

**Effective Date:** 2/9/2018

**PCN Type:** Assembly; Datasheet

## Description of Change

Silicon Labs is pleased to announce:

1. The propagation delay maximum specification has been lowered from 60 ns to 45 ns for all Si823x material shipped after 12/15/2017
2. The successful qualification of UTAC Thailand (UTL) as an additional Assembly site for Si823x 16 WB SOIC packages. UTL is an existing assembly site for Silicon Labs and is certified to ISO9001, ISO14001 and ISO/TS16949

UTL address:

UTAC Thai Limited  
78/1 Moo 5, Wellgrow Industrial Estate  
Bangsamask, Bangpakong  
Chachoengsao 24180  
Thailand

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

## Reason for Change

Adding second source for packaging; Test program limits tightened.

## Impact on Form, Fit, Function, Quality, Reliability

None for packaging second source, propagation delay specification limits now guarantee tighter limits than before - no impact on form and reliability.

## Product Identification

Existing Part #  
SI82305B-D-IS1  
SI82305B-D-IS1R  
SI82308B-D-IS  
SI82308B-D-IS1  
SI82308B-D-IS1R  
SI82308B-D-ISR  
SI8230AB-D-IS  
SI8230AB-D-IS1  
SI8230AB-D-IS1R  
SI8230AB-D-ISR  
SI8230AD-D-IS  
SI8230AD-D-IS3  
SI8230AD-D-IS3R  
SI8230AD-D-ISR  
SI8230BB-D-IS  
SI8230BB-D-IS1  
SI8230BB-D-IS1R  
SI8230BB-D-ISR  
SI8230BD-D-IS  
SI8230BD-D-IS3  
SI8230BD-D-IS3R  
SI8230BD-D-ISR  
SI8231AB-D-IS

SI8231AB-D-IS1  
SI8231AB-D-IS1R  
SI8231AB-D-ISR  
SI8231AD-D-IS  
SI8231AD-D-IS3  
SI8231AD-D-IS3R  
SI8231AD-D-ISR  
SI8231BB-D-IS  
SI8231BB-D-IS1  
SI8231BB-D-IS1R  
SI8231BB-D-ISR  
SI8231BD-D-IS  
SI8231BD-D-IS3  
SI8231BD-D-IS3R  
SI8231BD-D-ISR  
SI8232AB-D-IS  
SI8232AB-D-IS1  
SI8232AB-D-IS1R  
SI8232AB-D-ISR  
SI8232AD-D-IS  
SI8232AD-D-IS3  
SI8232AD-D-IS3R  
SI8232AD-D-ISR  
SI8232BB-D-IS  
SI8232BB-D-IS1  
SI8232BB-D-IS1R  
SI8232BB-D-ISR  
SI8232BD-D-IS  
SI8232BD-D-IS3  
SI8232BD-D-IS3R  
SI8232BD-D-ISR  
SI8232DB-D-IS  
SI8232DB-D-ISR  
SI8233AB-D-IM  
SI8233AB-D-IM1  
SI8233AB-D-IM1R  
SI8233AB-D-IMR  
SI8233AB-D-IS  
SI8233AB-D-IS1  
SI8233AB-D-IS1R  
SI8233AB-D-ISR  
SI8233AD-D-IS  
SI8233AD-D-IS3  
SI8233AD-D-IS3R  
SI8233AD-D-ISR  
SI8233BB-D-IM  
SI8233BB-D-IM1  
SI8233BB-D-IM1R  
SI8233BB-D-IMR  
SI8233BB-D-IS  
SI8233BB-D-IS1  
SI8233BB-D-IS1R  
SI8233BB-D-ISR  
SI8233BD-D-IS  
SI8233BD-D-IS3  
SI8233BD-D-IS3R  
SI8233BD-D-ISR  
SI8233CB-D-IM  
SI8233CB-D-IMR  
SI8234AB-D-IM  
SI8234AB-D-IM1  
SI8234AB-D-IM1R  
SI8234AB-D-IMR  
SI8234AB-D-IS  
SI8234AB-D-IS1  
SI8234AB-D-IS1R  
SI8234AB-D-ISR

SI8234AD-D-IS  
SI8234AD-D-IS3  
SI8234AD-D-IS3R  
SI8234AD-D-ISR  
SI8234BB-D-IM  
SI8234BB-D-IM1  
SI8234BB-D-IM1R  
SI8234BB-D-IMR  
SI8234BB-D-IS  
SI8234BB-D-IS1  
SI8234BB-D-IS1R  
SI8234BB-D-ISR  
SI8234BD-D-IS  
SI8234BD-D-IS3  
SI8234BD-D-IS3R  
SI8234BD-D-ISR  
SI8234CB-D-IS  
SI8234CB-D-ISR  
SI8235AB-D-IM  
SI8235AB-D-IM1  
SI8235AB-D-IM1R  
SI8235AB-D-IMR  
SI8235AB-D-IS  
SI8235AB-D-IS1  
SI8235AB-D-IS1R  
SI8235AB-D-ISR  
SI8235AD-D-IS  
SI8235AD-D-IS3  
SI8235AD-D-IS3R  
SI8235AD-D-ISR  
SI8235BA-D-IS1  
SI8235BA-D-IS1R  
SI8235BB-D-IM  
SI8235BB-D-IM1  
SI8235BB-D-IM1R  
SI8235BB-D-IMR  
SI8235BB-D-IS  
SI8235BB-D-IS1  
SI8235BB-D-IS1R  
SI8235BB-D-ISR  
SI8235BD-D-IS  
SI8235BD-D-IS3  
SI8235BD-D-IS3R  
SI8235BD-D-ISR  
SI8236AA-D-IM  
SI8236AA-D-IMR  
SI8236BA-D-IM  
SI8236BA-D-IMR  
SI8236BB-D-IM  
SI8236BB-D-IMR  
SI8237AB-D-IS1  
SI8237AB-D-IS1R  
SI8237AD-D-IS  
SI8237AD-D-IS3  
SI8237AD-D-IS3R  
SI8237AD-D-ISR  
SI8237BB-D-IS1  
SI8237BB-D-IS1R  
SI8237BD-D-IS  
SI8237BD-D-IS3  
SI8237BD-D-IS3R  
SI8237BD-D-ISR  
SI8238AB-D-IS1  
SI8238AB-D-IS1R  
SI8238AD-D-IS  
SI8238AD-D-IS3  
SI8238AD-D-IS3R

SI8238AD-D-ISR  
SI8238BB-D-ISR  
SI8238BB-D-ISR1R  
SI8238BD-D-ISR  
SI8238BD-D-ISR3  
SI8238BD-D-ISR3R  
SI8238BD-D-ISR

2. Packaging second source

Existing Part #

SI82308B-D-ISR  
SI82308B-D-ISR  
SI8230AB-D-ISR  
SI8230AB-D-ISR  
SI8230AD-D-ISR  
SI8230AD-D-ISR  
SI8230BB-D-ISR  
SI8230BB-D-ISR  
SI8230BD-D-ISR  
SI8230BD-D-ISR  
SI8231AB-D-ISR  
SI8231AB-D-ISR  
SI8231AD-D-ISR  
SI8231AD-D-ISR  
SI8231BB-D-ISR  
SI8231BB-D-ISR  
SI8231BD-D-ISR  
SI8231BD-D-ISR  
SI8232AB-D-ISR  
SI8232AB-D-ISR  
SI8232AD-D-ISR  
SI8232AD-D-ISR  
SI8232BB-D-ISR  
SI8232BB-D-ISR  
SI8232BD-D-ISR  
SI8232BD-D-ISR  
SI8232DB-D-ISR  
SI8232DB-D-ISR  
SI8233AB-D-ISR  
SI8233AB-D-ISR  
SI8233AD-D-ISR  
SI8233AD-D-ISR  
SI8233BB-D-ISR  
SI8233BB-D-ISR  
SI8233BD-D-ISR  
SI8233BD-D-ISR  
SI8234AB-D-ISR  
SI8234AB-D-ISR  
SI8234AD-D-ISR  
SI8234AD-D-ISR  
SI8234BB-D-ISR  
SI8234BB-D-ISR  
SI8234BD-D-ISR  
SI8234BD-D-ISR  
SI8234CB-D-ISR  
SI8234CB-D-ISR  
SI8235AB-D-ISR  
SI8235AB-D-ISR  
SI8235AD-D-ISR  
SI8235AD-D-ISR  
SI8235BB-D-ISR  
SI8235BB-D-ISR  
SI8235BD-D-ISR  
SI8235BD-D-ISR  
SI8237AD-D-ISR  
SI8237AD-D-ISR  
SI8237BD-D-ISR

SI8237BD-D-ISR  
SI8238AD-D-IS  
SI8238AD-D-ISR  
SI8238BD-D-IS  
SI8238BD-D-ISR

**Last Date of Unchanged Product:** 2/9/2018

### Qualification 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

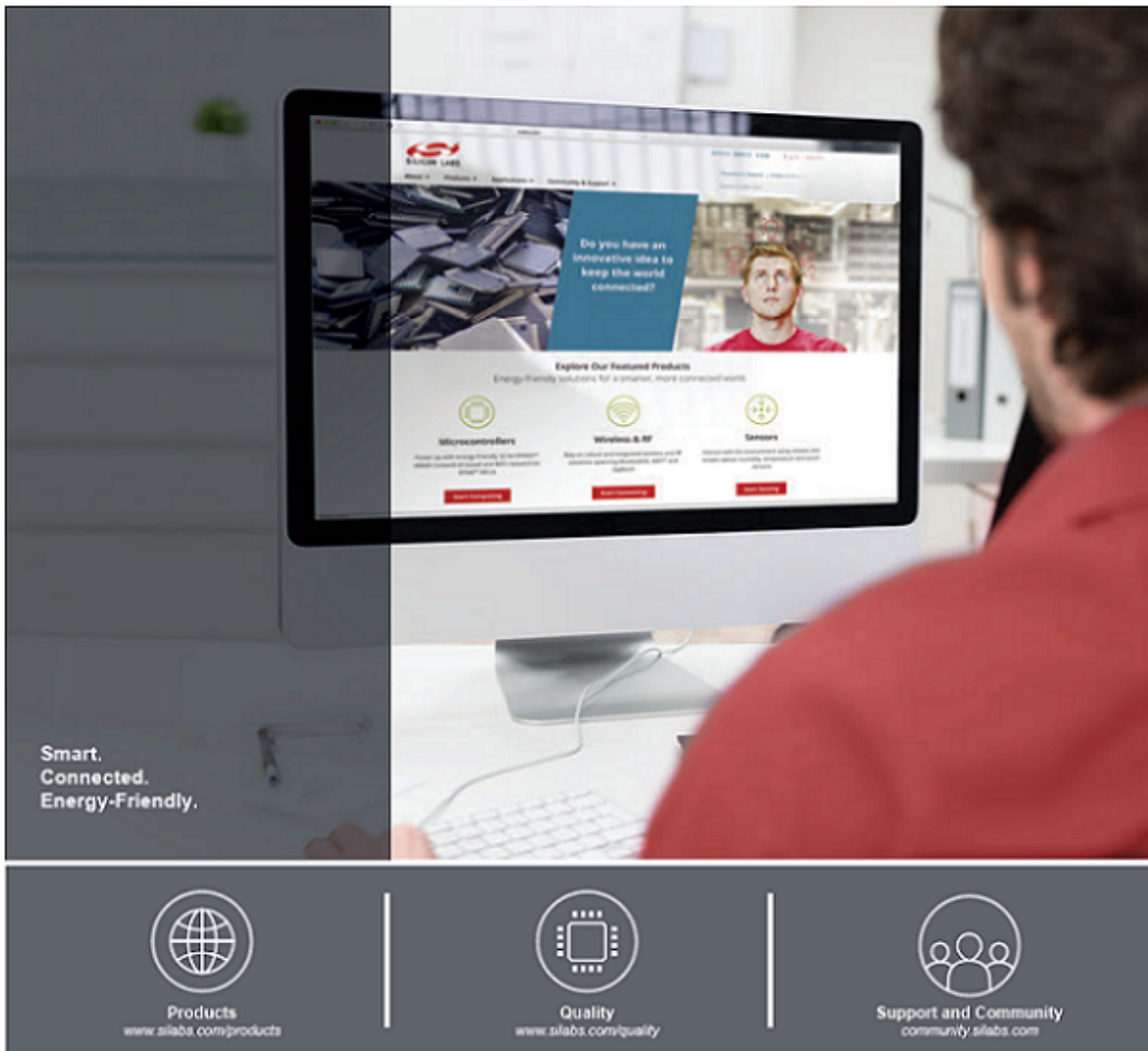
See below.

Test Group A – Accelerated Environment Stress Tests - 16-SOIC-300mil (UTAC)							
HAST	JA110		Q040885	0/92	2, 4		
	130°C, 85%RH	3 lots, N=>77	Q040833	0/92	2, 4	3 lots	Pass
	Vcc=5V, 96 hours		Q040807	0/92	2, 4	0/276	
UHAST	JA110		Q040884	0/92	2, 4		
	130°C, 85%RH	3 lots, N=>77	Q040834	0/92	2, 4	3 lots	Pass
	96 hours		Q040808	0/92	2, 4	0/276	
Temp Cycle	JA104		Q040883	0/92	2, 4		
	Cond C: -65°C to 150°C	3 lots, N=>77	Q040832	0/92	2, 4	3 lots	Pass
	500 cycles		Q040806	0/92	2, 4	0/276	
HTSL	JA103		Q040882	0/92	2, 4		
	150°C, 1000hr	1 lot, N=>45	Q040831	0/92	2, 4	3 lots	Pass
			Q040805	0/92	2, 4	0/276	

Notes:

1. Parts are Pre-conditioned at MSL 2a @ 260°C
2. Parts are Pre-conditioned at MSL 2 @ 260°C
3. Parts are Pre-conditioned at MSL 3 @ 260°C
4. New Polyimide material used

Test Group C – Package Assembly Integrity Tests - 16-SOIC-300mil (UTAC)							
Wire Bond Shear	AEC-Q100-001		796899	0/5			
		5 units, N=>30	796900	0/5		3 lots	Pass
			802562	0/5		0/15	
Wire Bond Pull	M-STD-883		796899	0/5			
	Performed post-TC	5 units, N=>30	796900	0/5		3 lots	Pass
			802562	0/5		0/15	
Physical Dimensions	JB100		796899	0/30			
		3 lots, N=>10	796900	0/30		3 lots	Pass
			802562	0/30		0/90	
Solderability	JB102		796899	0/10			
		1 lot, N=>15	796900	0/10		3 lots	Pass
			802562	0/10		0/30	



#### 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>