



# 201104879 Si82xx/Si84xx/Si86xx 8/16L-SOIC-150mils Additional Assembly, Test and Ship

**PCN Issue Date:** 11/4/2020

**Effective Date:** 2/10/2021

**PCN Type:** Assembly

## Description of Change

Silicon Labs is pleased to announce the successful qualification of UTAC Thailand (UTL) as an additional assembly, test and shipping site for Si82xx/Si84xx/Si86xx, 8/16L-SOIC-150mils. UTL is an existing assembly, test and shipping site for Silicon Labs, and is certified to ISO9001, ISO14001 and IATF16949.

UTL Ship Address:  
UTAC Thai Limited  
Wellgrow Industrial Estate, 73 Moo 5, Bangna-Trad (KM.36)  
T.Bangsamak, Bangpakong Chachoengsao 24180 Thailand  
Bangkok  
Zip code: 24180

As of the effective date of the PCN, Silicon Labs may assemble, test and ship from either of the qualified assembly, test and shipping sites.

## Reason for Change

The additional assembly and test locations will provide additional capacity for supply assurance.

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

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

The same test equipment including ATE, test load board hardware, and test application software will be used at both locations.

## Product Identification

Existing Part #  
SI8220BB-D-IS  
SI8220BB-D-ISR  
SI8220CB-D-IS  
SI8220CB-D-ISR  
SI8220DB-D-IS  
SI8220DB-D-ISR  
SI8221CC-D-IS  
SI8221CC-D-ISR  
SI8221DC-D-IS  
SI8221DC-D-ISR  
SI82305B-D-IS1  
SI82305B-D-IS1R  
SI82308B-D-IS1  
SI82308B-D-IS1R  
SI8230AC-D-IS1  
SI8230AC-D-IS1R  
SI8230BC-D-IS1  
SI8230BC-D-IS1R  
SI8231AC-D-IS1  
SI8231AC-D-IS1R

SI8231BC-D-IS1  
SI8231BC-D-ISR  
SI8232AC-D-IS1  
SI8232AC-D-ISR  
SI8232BC-D-IS1  
SI8232BC-D-ISR  
SI8233AB-D-IS1  
SI8233AB-D-ISR  
SI8233AC-D-IS1  
SI8233AC-D-ISR  
SI8233BC-D-IS1  
SI8233BC-D-ISR  
SI8234AC-D-IS1  
SI8234AC-D-ISR  
SI8234BC-D-IS1  
SI8234BC-D-ISR  
SI8235AC-D-IS1  
SI8235AC-D-ISR  
SI8235BC-D-IS1  
SI8235BC-D-ISR  
SI8237AC-D-IS1  
SI8237AC-D-ISR  
SI8237BC-D-IS1  
SI8237BC-D-ISR  
SI8238AC-D-IS1  
SI8238AC-D-ISR  
SI8238BC-D-IS1  
SI8238BC-D-ISR  
SI8400AB-A-IS  
SI8400AB-A-ISR  
SI8400AB-B-IS  
SI8400AB-B-ISR  
SI8401AB-B-IS  
SI8401AB-B-ISR  
SI8405AB-B-IS1  
SI8405AB-B-ISR  
SI8420BB-D-IS  
SI8420BB-D-ISR  
SI8421AB-D-IS  
SI8421AB-D-ISR  
SI8422AB-D-IS  
SI8422AB-D-ISR  
SI8423ETA-D-IS  
SI8423ETA-D-ISR  
SI8440BA-D-IS1  
SI8440BA-D-ISR  
SI8600AB-B-IS  
SI8600AB-B-ISR  
SI8605AB-B-IS1  
SI8605AB-B-ISR  
SI8605AC-B-IS1  
SI8605AC-B-ISR  
SI8610BC-B-IS  
SI8610BC-B-ISR  
SI8620BB-B-IS  
SI8620BB-B-ISR  
SI8620BC-B-IS  
SI8620BC-B-ISR  
SI8621BC-B-IS  
SI8621BC-B-ISR  
SI8621EC-B-IS  
SI8621EC-B-ISR  
SI8622BC-B-IS  
SI8622BC-B-ISR  
SI8622EC-B-IS  
SI8622EC-B-ISR  
SI8640EC-B-IS1

SI8640EC-B-IS1R  
SI8641EC-B-IS1  
SI8641EC-B-IS1R  
SI8642AB-B-IS1  
SI8642AB-B-IS1R  
SI8645BA-B-IS1  
SI8645BA-B-IS1R  
SI8645BA-C-IS1  
SI8645BA-C-IS1R  
SI8651EC-B-IS1  
SI8651EC-B-IS1R  
SI8655BA-C-IS1  
SI8655BA-C-IS1R  
SI8660AB-B-IS1  
SI8660AB-B-IS1R  
SI8660BA-B-IS1  
SI8660BA-B-IS1R  
SI8660BA-C-IS1  
SI8660BA-C-IS1R

**Last Date of Unchanged Product:** 2/10/2021

### Qualification Samples

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](mailto:PCNEarlyAcceptance@silabs.com)

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### Qualification Data

Please see Qualification Report below.



## Si84xxyy / Si86xxyy AEC-Q100 Qualification Report

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### Part Rev B, Vanguard Fabrication, ASECL Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
<b>Test Group A – Accelerated Environment Stress Tests - 08-SOIC-150mil (UTAC)</b>							
HAST	JA110	3 lots, N=>77	Q045941	0/77	2	3 lots 0/231	Pass
	130°C, 85%RH		Q045942	0/77	2		
	Vcc=5V, 96 hours		Q045943	0/77	2		
UHAST	JA110	3 lots, N=>77	Q045905	0/87	2	3 lots 0/261	Pass
	130°C, 85%RH		Q045906	0/87	2		
	96 hours		Q045907	0/87	2		
Temp Cycle	JA104	3 lots, N=>77	Q045902	0/84	2	3 lots 0/258	Pass
	Cond C: -65°C to 150°C		Q045903	0/86	2		
	500 cycles		Q045904	0/88	2		
HTSL	JA103	1 lot, N=>45	Q045899	0/35	2	3 lots 0/105	Pass
	150°C, 1000hr		Q045900	0/35	2		
			Q045901	0/35	2		
<b>Test Group C – Package Assembly Integrity Tests - 08-SOIC-150mil (UTAC)</b>							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	1014121	0/5		3 lots 0/15	Pass
			1014123	0/5			
			1014125	0/5			
Wire Bond Pull	M-STD-883 Performed post-TC	5 units, N=>30	1014121	0/5		3 lots 0/15	Pass
			1014123	0/5			
			1014125	0/5			
Physical Dimensions	JB100	3 lots, N=>10	1014121	0/30		3 lots 0/90	Pass
			1014123	0/30			
			1014125	0/30			
Solderability	JB102	1 lot, N=>15	1014121	0/10		3 lots 0/30	Pass
			1014123	0/10			
			1014125	0/10			
<b>Test Group E – Electrical Verification</b>							
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q045849	08-SOIC-150	UTAC	1.25 kV	Class C3

Notes:

2. Parts are Pre-conditioned at MSL 2 @ 260°C



## SI823x AEC-Q100 Qualification Report

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Part Rev B, Vanguard Fabrication, ASECL Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
<b>Test Group A – Accelerated Environment Stress Tests - 16-SOIC-150mil (UTAC)</b>							
HAST	JA110 130°C, 85%RH Vcc=5.5V, 96 hours	3 lots, N=>77	Q045925	0/77	2, 4		Pass
			Q045926	0/77	2, 4	3 lots	
			Q045927	0/77	2, 4	0/231	
UFAST	JA110 130°C, 85%RH 96 hours	3 lots, N=>77	Q045937	0/87	2, 4		Pass
			Q045938	0/87	2, 4	3 lots	
			Q045939	0/85	2, 4	0/259	
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q045934	0/87	2, 4		Pass
			Q045935	0/87	2, 4	3 lots	
			Q045936	0/87	2, 4	0/261	
HTSL	JA103 150°C, 1000hr	1 lot, N=>45	Q045928	0/35	2, 4		Pass
			Q045929	0/35	2, 4	3 lots	
			Q045930	0/35	2, 4	0/105	
<b>Test Group C – Package Assembly Integrity Tests - 16-SOIC-150mil (UTAC)</b>							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	1024227	0/5			Pass
			1024228	0/5		3 lots	
			1024229	0/5		0/15	
Wire Bond Pull	M-STD-883 Performed post-TC	5 units, N=>30	1024227	0/5			Pass
			1024228	0/5		3 lots	
			1024229	0/5		0/15	
Physical Dimensions	JB100	3 lots, N=>10	1024227	0/30			Pass
			1024228	0/30		3 lots	
			1024229	0/30		0/90	
Solderability	JB102	1 lot, N=>15	1024227	0/10			Pass
			1024228	0/10		3 lots	
			1024229	0/10		0/30	
<b>Test Group E – Electrical Verification</b>							
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q046091	16-SOIC-150	UTAC	1.25 kV	Class C3

Notes:

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



## Si84xxyy / Si86xxyy AEC-Q100 Qualification Report

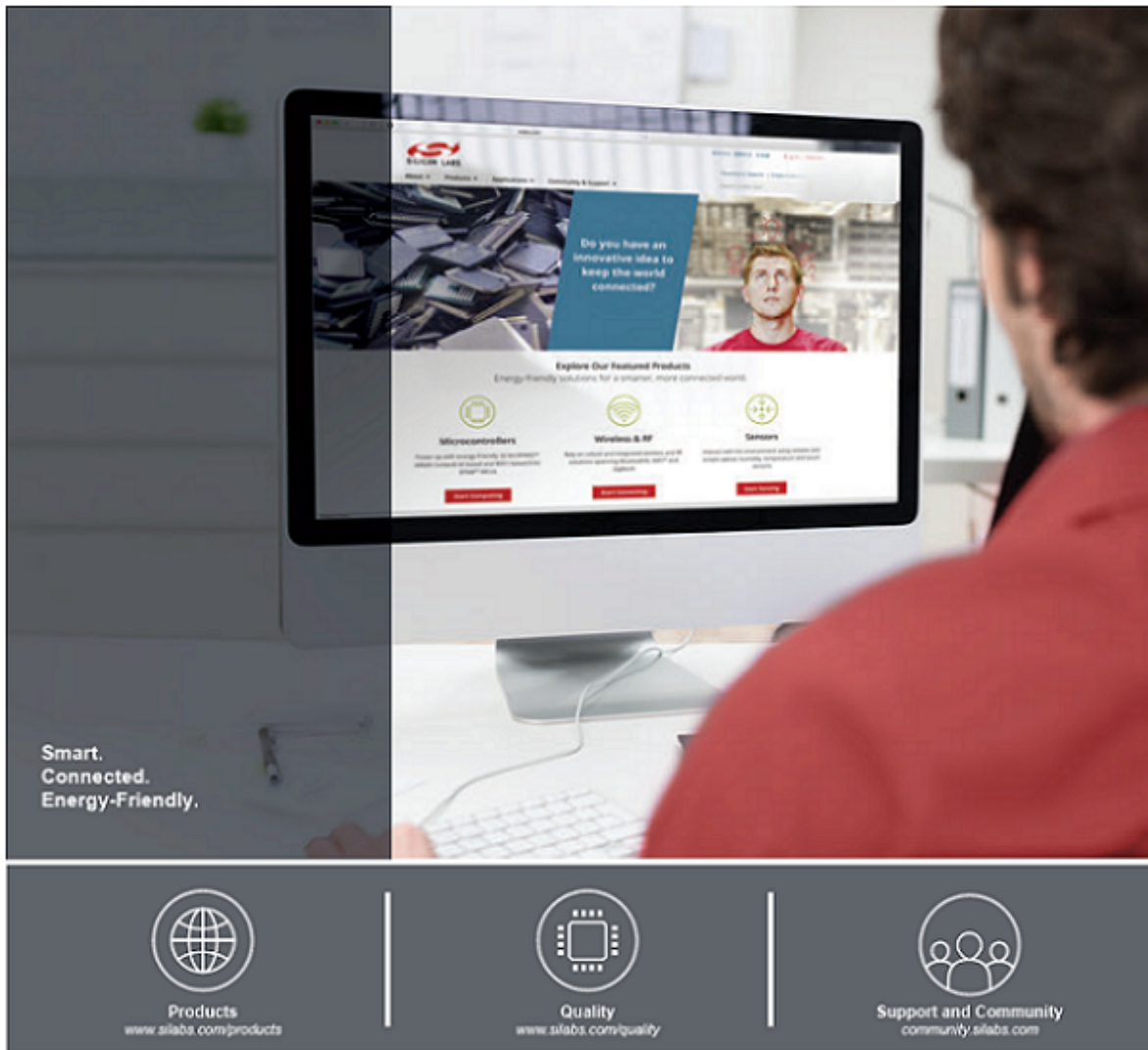
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### Part Rev B, Vanguard Fabrication, ASECL Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID of Start	Fail/Pass or End	Notes	Summary	Status
<b>Test Group A – Accelerated Environment Stress Tests - 16-SOIC-150mil (UTAC)</b>							
HAST	JA110 130°C, 85%RH Vcc=5V, 96 hours	3 lots, N=>77	Q045909	0/77	2	3 lots 0/231	Pass
			Q045910	0/77	2		
			Q045911	0/77	2		
UHAST	JA110 130°C, 85%RH 96 hours	3 lots, N=>77	Q045921	0/87	2	3 lots 0/261	Pass
			Q045922	0/87	2		
			Q045923	0/87	2		
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q045918	0/87	2	3 lots 0/261	Pass
			Q045919	0/87	2		
			Q045920	0/87	2		
HTSL	JA103 150°C, 1000hr	1 lot, N=>45	Q045912	0/35	2	3 lots 0/105	Pass
			Q045913	0/35	2		
			Q045914	0/35	2		
<b>Test Group C – Package Assembly Integrity Tests - 16-SOIC-150mil (UTAC)</b>							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	1024230	0/5		3 lots 0/15	Pass
			1024231	0/5			
			1024232	0/5			
Wire Bond Pull	M-STD-883 Performed post-TC	5 units, N=>30	1024230	0/5		3 lots 0/15	Pass
			1024231	0/5			
			1024232	0/5			
Physical Dimensions	JB100	3 lots, N=>10	1024230	0/30		3 lots 0/90	Pass
			1024231	0/30			
			1024232	0/30			
Solderability	JB102	1 lot, N=>15	1024230	0/10		3 lots 0/30	Pass
			1024231	0/10			
			1024232	0/10			
<b>Test Group E – Electrical Verification</b>							
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q046092	16-SOIC-150	UTAC	1.25 kV	Class C3

Notes:

2. Parts are Pre-conditioned at MSL 2 @ 260°C



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