

2305171455 Additional Assembly, Test and Ship Site for Si401x Automotive

PCN Issue Date: May 17, 2023 Effective Date: Aug 23, 2023

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 ship site for Si401x(Automotive),10-MSOP. UTAC Thailand is an existing assembly, test and ship site for Silicon Labs, and is certified to ISO9001, ISO14001 and IATF 16949.

UTL Address - Ship Site UTAC Thai Limited (UTL 3) 73 Moo5, Wellgrow Industrial Estate Bangsamak, Bangpakong, Chachoengsao, 24180, Thailand

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

Reason for Change

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

Impact on Form, Fit, Function, Quality, Reliability

There is no change on form, fit, function, quality or reliability.

Product Identification

Existing Part #
SI4010-C2-AT
SI4010-C2-ATR
SI4010-C2003AT
SI4010-C2004AT
SI4010-C2004AT
SI4012-C1001AT
SI4012-C1001ATR

Last Date of Unchanged Product: Aug 23, 2023

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

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 refer to the Qualification Report below.

Test Name		in part or whole without Silicon		JOHNSON, THE GO	coment is one	unicone o n pr	uned or electronic	July Julius
Test Group A — Accelerated Environment Stress Tests - 10MSOP - UTL HAST JA110 130°C, 85%RH JA110 130°C, 85%RH JA110 JA110 130°C, 85%RH JA10 JA10 Q050159 Q077 Q050159 Q077 Q050159 Q077 Q0231 UHAST JA110 JA10 Q049531 Q077 13 lots Pass G049535 Q077 Q049535 Q077 Q049535 Q077 Q049535 Q077 Q049532 Q077 Q049532 Q077 Cond C: -65°C to 150°C JA104 Cond C: -65°C to 150°C JA103 J50°C I lot, N=>45 Q049544 Q077 Q049536 Q077 1 3 lots Pass S00 cycles HTSL JA103 150°C 1 lot, N=>45 Q049540 Q049544 Q077 Q049536 Q077 1 3 lots Pass Fest Group B — Accelerated Lifetime Simulation Tests HTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours Total Stress Vcc=3.6V, 1000 hours Total Stress Vcc=3.6V, 1000 hours Total Stress Test Group B — Accelerated Lifetime Simulation Tests HTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours Total Stress Vcc=3.6V, 1000 hours Total Stress Test Group B — Accelerated Lifetime Simulation Tests HTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours Total Stress Q029612 Q049543 Q078 J15403 J15403 Q030553 Q0305	7			THE RESERVE OF THE PARTY OF THE			6	C+-+
HAST JA110 130°C, 85%RH Vcc=3.6V, 96 hours UHAST JA110 JA10 JA10 JA10 JA10 Cond C: -65°C hours JA104 Cond C: -65°C to 150°C JA104 Cond C: -65°C to 150°C JA104 JA103 150°C 1 lot, N=>45 Q049540 Test Group B → Accelerated Lifetime Simulation Tests HTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours JA108 J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours J _A = -10°C, Dynamic J _A = -10°C, Dynamic Vcc=3.6V, 1000 hours J _A = -10°C, Dyn					Ena	Notes	Summary	Status
130°C, 85%RH 3 lots, N=>77 Q050158 0/77 1 3 lots Pass Vcc=3.6V, 96 hours Q050159 0/77 1 3 lots Pass Q050159 Q077 Q0231 Q0231 Q050159 Q077 Q0231 Q0231 Q077 Q049535 Q077 Q049535 Q077 Q049535 Q077 Q0231 Q049531 Q077 Q049535 Q077 Q049535 Q077 Q049535 Q077 Q0231 Q049531 Q077 Q0231 Q049535 Q077 Q049536 Q077 Q0231 Q049535 Q077 Q049536 Q077 Q0231 Q049535 Q049545			s rests - rumsu		0/77	T	T T	
Vcc=3.6V, 96 hours			2 lete New 77			- 20	2 late	D
UHAST JA110 130°C, 85%RH 3 lots, N=>77 Q049531 Q049535 0/77 1 3 lots Pass 96 hours Q049543 0/77 0/231			3 lots, IN->11	0.550	1.07		100000000000000000000000000000000000000	rass
130°C, 85%RH 3 lots, N=>77 Q049535 0,777 1 3 lots Pass	UHAST		1			1	0/231	
Performed post-TC Pass		T125070	3 lote N=>77				2 lote	Page
Temp Cycle JA104 Cond C: -65°C to 150°C Solo cycles JA103 150°C 1000 hours Test Group B - Accelerated Lifetime Simulation Tests HTOL JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _J ≥ 125°C, Dynamic Solots, N=>77 JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours ABC-Q100-001 Sunits, N=>50 1154038 0/30 3 lots Pass Performed post-TC Sunits, N=>30 1154039 0/30 3 lots Pass Physical Dimensions JB100 Ja108		DOMESTIC STREET	3 lots, IN->11		A 100 TO		10.000000000000000000000000000000000000	Pass
Cond C: -65°C to 150°C 3 lots, N=>77 Q049536 0777 1 3 lots Pass 500 cycles	Temp Cycle	The state of the s			The state of the s		U/231	
S00 cycles			2 loto New 77			- 20	2 /c/-	D
HTSL JA103 150°C 1000 hours Test Group B – Accelerated Lifetime Simulation Tests HTOL JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours ELFR JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 1000 hours ELFR JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 1000 hours ELFR JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 48 hours Test Group C – Package Assembly Integrity Tests Wire Bond Shear AEC-Q100-001 Wire Bond Pull M-STD-883 Performed post-TC 5 units, N=>30 1154038 0/30 Physical Dimensions JB100 Pass Volume Solderability JB102 I lot, N=>15 1154038 0/30 I154039 0/30 3 lots Pass I154040 0/30 0/90 Solderability JB102 I lot, N=>15 1154038 0/30 I154039 0/30 3 lots Pass I154040 0/30 0/90 Solderability JB102 I lot, N=>15 1154038 0/30 I154039 0/30 3 lots Pass			3 IOIS, N=>//	F2387 F (87.78)		1	2007/99/2007/2	Pass
150°C 1000 hours 1000	HTSI			Q049544	UIII	-	U/231	
Test Group B – Accelerated Lifetime Simulation Tests HTOL JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 48 hours JA108 T _A = -10°0°, Dynamic Vcc=3.6V, 48 hours JA108 T _A = -10°0°, Dynamic Vcc=3.6V, 48 hours	1150		t lot N=+ 45	0040540	0/45		t to	Dane
Test Group B – Accelerated Lifetime Simulation Tests HTOL JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 1000 hours JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours Vcc=3.6V, 1000 hours I lot, N=>32 Q022643 Q030320 Q080 Q0240 Q02612 Q02612 Q080 Q080 Q080 Q080 Q080 Q080 Q080 Q0			1 lot, N=>45	Q049540	U/45	1	16/23/67/2	Pass
HTOL JA108	Test Group B - Acce	7 T T T T T T T T T T T T T T T T T T T	Toets				0/45	
T _J ≥ 125°C, Dynamic Vcc=3.6V, 1000 hours Vcc=3.6V, 48 hours Vcs=4.6V, 40 hours Vcs=4.6V, 40 hours Vcs=4.	Market Market Street Commencer Street Commencer Commence		1 10313	0000700	0100	_		
Vcc=3.6V, 1000 hours	IIIOL		2 lots N=>77				2 loto	Door
LTOL JA108 T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours ELFR JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 48 hours Test Group C − Package Assembly Integrity Tests Wire Bond Shear AEC-Q100-001 Wire Bond Pull M-STD-883 Performed post-TC 5 units, N=>30 Physical Dimensions JB100 Solderability JB102 Total N=>30 1 lot, N=>15 1 lot, N=>16 1 lot, N=>15 1 lot, N=>16 1			3 lots, IN->//	77227323				Pass
T _A = -10°C, Dynamic Vcc=3.6V, 1000 hours ELFR JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 48 hours Vcc=3.6	LTOL		-	Q030320	0/80	-	0/240	
Vcc=3.6V, 1000 hours	LIOL	The state of the s	4 to 4 New 22	0000040	0/70		2 let	Dane
ELFR JA108 T _J ≥ 125°C, Dynamic Vcc=3.6V, 48 hours Jest Group C − Package Assembly Integrity Tests Wire Bond Shear AEC-Q100-001 M-STD-883 Performed post-TC Physical Dimensions JB100 Solderability JB102 JA108 Q029612 Q030542 Q0810 Q030542 Q0886 Q030553 Q0806 Q030553 Q0806 Q030553 Q0806 Q030553 Q0806 Q030553 Q0806 Q030553 Q0806 Q0300 Q030553 Q0806 Q0300 Q030553 Q0806 Q0300 Q			1 lot, N=>32	Q022643	U//8		20023	Pass
T _J ≥ 125°C, Dynamic 3 lots, N=>500 Q030542 0/810 3 lots Pass Vcc=3.6V, 48 hours Q030553 0/806 0/2426 Test Group C – Package Assembly Integrity Tests Wire Bond Shear AEC-Q100-001 1154038 0/30 3 lots Pass 1154040 0/30 0/90 Wire Bond Pull M-STD-883 1154038 0/30 3 lots Pass 1154038 0/30 3 lots Pass 1154040 0/30 0/90 Performed post-TC 5 units, N=>30 1154039 0/30 3 lots Pass 1154040 0/30 0/90 Physical Dimensions JB100 1154038 0/30 3 lots Pass 1154039 0/30 3 lots Pass 1154040 0/30 0/90 Solderability JB102 1154038 0/10	ELED					-	0/78	
Vcc=3.6V, 48 hours Q030553 0/806 0/2426	ELFK	The state of the s	2 lete N== 500				264	D
Test Group C - Package Assembly Integrity Tests Wire Bond Shear			3 lots, N=>500	(3.15) (3.55)			1.0000000000000000000000000000000000000	Pass
Wire Bond Shear	Tast Group C - Pack		ato.	Q030553	0/806	_	0/2426	
5 units, N=>30			1	4454000	0/20	_		
M-STD-883	cond chedi	AEC-Q100-001	E units No. 20	_0.00000000000000000000000000000000000	200000		2 lete	D
Wire Bond Pull M-STD-883 Performed post-TC 1154038 5 units, N=>30 0/30 1154039 0/30 0/30 3 lots 0/90 Pass 0/90 Physical Dimensions Physical Dimensions Physical Dimensions JB100 3 lots, N=>10 1154038 1154039 0/30 0/30 3 lots 0/90 Pass 0/90 Solderability JB102 1154038 1154039 0/10 0/10 3 lots 0/10 Pass 0/10 1 lot, N=>15 1154039 1154039 0/10 3 lots 0/10 Pass			5 units, N=>30	100000000			2000	Pass
Performed post-TC 5 units, N=>30 1154039 0/30 3 lots Pass 1154040 0/30 0/90 Physical Dimensions JB100 1154038 0/30 3 lots Pass 1154040 0/30 0/90 3 lots, N=>10 1154039 0/30 3 lots Pass 1154040 0/30 0/90 Solderability JB102 1154038 0/10 1 lot, N=>15 1154039 0/10 3 lots Pass	Wire Bond Pull	M CTD 002		7.00	75.00000	1	0/90	
1154040 0/30 0/90	Dona i dii	00000000000000000000000000000000000000	E contra May 22	100 CO 100 CO			21/4	D
Physical Dimensions JB100		Performed post-1C	5 units, N=>30	C1000100000000000000000000000000000000			17778383	Pass
3 lots, N=>10 1154039 0/30 3 lots Pass 1154040 0/30 0/90 Solderability JB102 1154038 0/10 1 lot, N=>15 1154039 0/10 3 lots Pass	Physical Dimensions	10100	1			-	0/90	
1154040 0/30 0/90 Solderability	. Ilyonal Dillettol015	JB100	2 late New 40	0.000			2144	Davis
Solderability JB102 1154038 0/10 1 lot, N=>15 1154039 0/10 3 lots Pass			3 lots, N=>10				0.00	Pass
1 lot, N=>15 1154039 0/10 3 lots Pass	Solderability	10.400	+			-	0/90	
	Soiderability	JB102		0.0000000000000000000000000000000000000				
1154040 0/10 0/30			1 lot, N=>15		0/10		247,55,153	Pass

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Prepared on: 10-May-2023

Approved by: Wilson Choy



Si4010 10-MSOP Product Qualification Report

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			LOT ID OF F	all/Pass or			
Test Name	Test Condition	Qualification	Start	End	Notes	Summary	Status
Test Group E - Ele	ctrical Verification	100					
ESD-HBM	JA114	1 lot, N=>3	Q029675			2000V	Class H2
ESD-CDM	JC101	1 lot, N=>3	Q029730			1000V	Class C6
Latch Up	JESD78 ±200mA Overvoltage = 5.4V	1 lot, N=>3	Q029115 Q029116		25 °C 85 °C		Pass
Electromagnetic Compatibility	SAE J1752	1 lot, N=>1	Q030669				Pass

Notes:

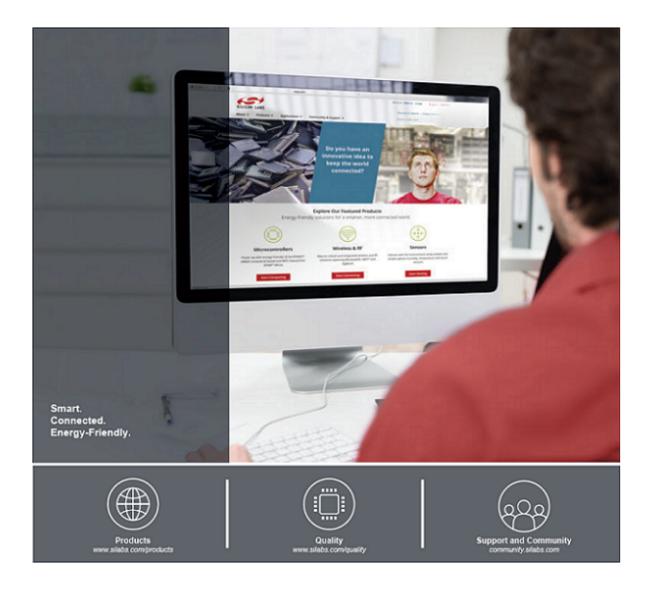
1. Parts are Pre-conditioned at MSL2 @ 260C Preconditioning

This report applies to the following part numbers:				
Si4010-C2-AT	Si4010-C1xxxAT	Si4010-C2xxxAT		

Approved by: Wilson Choy

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Prepared on: 10-May-2023



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