



2602251775 Additional Assembly, Test and Ship Site for Various products and PFAS Free Qual

PCN Issue Date: Feb 25, 2026

Effective Date: May 29, 2026

PCN Type: Assembly; Test

Description of Change

Silicon Labs is pleased to announce the successful qualification of Unisem's new assembly site "Gopeng" which is located in the same city as the current site "Simpang Pulai" for C8051F550/CP211x/EFM8SB2 products (24-QFN-4x4).

Silicon Labs is pleased to announce the successful qualification of Unisem's new assembly, test and ship site "Gopeng" which is located in the same city as the current site "Simpang Pulai" for C8051F3x/4x/CP21xx/CT326 products (28-QFN-5x5) and Si4x1x/3x products (20-QFN-4x4).

There is no change in equipment, process and recipe. Unisem Gopeng site is certified to ISO9001 and ISO14001.

As of the effective date of this PCN, Silicon Labs will phase in the shipments of above-stated products assembled, tested and shipped from Gopeng site.

Unisem Gopeng site address:

UNISEM (M) BHD
LOT 302285, JALAN INDUSTRI 1/1,
KAWASAN PERINDUSTRIAN GOPENG,
GOPENG, PERAK, 31600
MALAYSIA.

Additionally, Silicon Labs is pleased to announce the successful qualification of die attach epoxy material Sumitomo CRM-1076NS and Resonac EN4900GC.

- For Si401x products (10-MSOP-3x3), the die attach epoxy will change from Henkel Ablebond 8290 (contains PFAS) to Sumitomo CRM-1076NS (PFAS-Free).

- For C8051F3x/4x/CP21xx/CT326 products (28-QFN-5x5), C8051F550/CP211x/EFM8SB2 products (24-QFN-4x4) and Si4x1x/3x products (20-QFN-4x4), the die attach epoxy will change from Henkel Ablebond 8290 (contains PFAS) to Resonac EN4900GC (PFAS-Free).

As of the effective date of this PCN, Silicon Labs will phase in the products built with new die attach epoxy material.

Reason for Change

Capacity expansion & PFAS-Free initiative

Impact on Form, Fit, Function, Quality, Reliability

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

Product Identification

Existing Part #
C8051F311-GM
C8051F311-GMR
C8051F313-GM
C8051F313-GMR
C8051F315-GM
C8051F315-GMR
C8051F326-GM
C8051F326-GMR
C8051F327-GM
C8051F327-GMR
C8051F411-GM
C8051F411-GMR
C8051F413-GM
C8051F413-GMR
C8051F550-AM
C8051F550-AMR
CF411-PM0755GM
CF411-PM0755GMR
CP2102-GM
CP2102-GMR
CP2102PX0662GM
CP2102PX0662GMR
CP2102S1293DGM
CP2102S1293DGMR
CP2102SX0214GM
CP2102SX0214GMR
CP2102SX0435GM
CP2102SX0435GMR
CP2102SX0567GM
CP2102SX0567GMR
CP2102SX0715GM
CP2102SX0715GMR
CP2103-GM
CP2103-GMR
CP2110-F01-GMR
CP2110-F02-GM1
CP2110-F02-GM1R
CP2112-F03-GMR
CT326-PX0858GM
CT326-PX0858GMR
EFM8SB20F16G-B-QFN24
EFM8SB20F16G-B-QFN24R
EFM8SB20F32G-B-QFN24
EFM8SB20F32G-B-QFN24R
EFM8SB20F64G-B-QFN24
EFM8SB20F64G-B-QFN24R
SI4010-C2003AT
SI4010-C2003ATR
SI4010-C2004AT
SI4010-C2004ATR
SI4010-C200RGTR
SI4010-C200RGTR
SI4010-C2019GT
SI4010-C2019GTR
SI4010-C201AGT
SI4010-C201AGTR
SI4010-C201LGT

SI4010-C201LGTR
SI4010-C201MGT
SI4010-C201MGTR
SI4010-C201SGT
SI4010-C201SGTR
SI4010-C201TGT
SI4010-C201TGTR
SI4010-C2020GT
SI4010-C2020GTR
SI4010-C2022GT
SI4010-C2022GTR
SI4010-C2024GT
SI4010-C2024GTR
SI4010-C2025GT
SI4010-C2025GTR
SI4010-C2026GT
SI4010-C2026GTR
SI4010-C2027GT
SI4010-C2027GTR
SI4010-C2-AT
SI4010-C2-ATR
SI4010-C2-GT
SI4010-C2-GTR
SI4010-C2M20GT
SI4010-C2M20GTR
SI4010-C2P02GT
SI4010-C2P02GTR
SI4010-C2-ZT1
SI4010-C2-ZT1R
SI4011-C1001GT
SI4011-C1001GTR
SI4011-C100GGT
SI4011-C100GGTR
SI4011-C100JGT
SI4011-C100JGTR
SI4011-C100MGT
SI4011-C100MGTR
SI4011-C100NGT
SI4011-C100NGTR
SI4012-C1001AT
SI4012-C1001ATR
SI4012-C1001GT
SI4012-C1001GTR
SI4030-B1-FM
SI4030-B1-FMR
SI4031-B1-FM
SI4031-B1-FMR
SI4032-B1-FM
SI4032-B1-FMR
SI4032-B1-ZM2
SI4032-B1-ZM2R
SI4313-B1-FM
SI4313-B1-FMR
SI4330-B1-FM
SI4330-B1-FMR
SI4330-B1-YM0
SI4330-B1-YM0R
SI4430-B1-FM
SI4430-B1-FMR
SI4431-B1-FM
SI4431-B1-FMR

SI4432-B1-FM
SI4432-B1-FMR
SI4432-B1-YM2
SI4432-B1-YM2R
SI4432-B1-ZM2
SI4432-B1-ZM2R
SI4432-V2-FM
SI4432-V2-FMR

Last Date of Unchanged Product: May 29, 2026

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 <https://www.silabs.com>.

Customers may approve early PCN acceptance by emailing approval, along with PCN # to PCN@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. <https://www.silabs.com/profile>

Qualification Data

See attached



SI401x-Cx-GS/GT/AS/AT Qualification Report

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Part Rev C2, TSMC Fabrication, Unisem 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 - 14SOIC - Unisem							
HAST	AEC-Q100, JESD22-A110 130°C, 85%RH Vcc=3.6V, 96 hours	3 lots, N=>77	Q28851 Q28876 Q28885	0/80 0/80 0/79	1 1 1	3 lots 0/239	Pass
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q28852 Q28877 Q28882	0/80 0/80 0/80	1 1 1	3 lots 0/240	Pass
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q28853 Q28878 Q28883	0/80 0/80 0/80	1 1 1	3 lots 0/240	Pass
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q28850 Q28879 Q28884	0/27 0/50 0/50	1 1 1	3 lots 0/127	Pass
Test Group A – Accelerated Environment Stress Tests - 14SOIC - ASECL							
HAST	AEC-Q100, JESD22-A110 130°C, 85%RH Vcc=3.6V, 96 hours	3 lots, N=>77	Q31305 Q31306 Q31307	0/77 0/77 0/77	1 1 1	3 lots 0/231	Pass
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q31288 Q31289 Q31290	0/77 0/77 0/77	1 1 1	3 lots 0/231	Pass
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q31294 Q31295 Q31296	0/77 0/77 0/77	1 1 1	3 lots 0/231	Pass
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q31300 Q31301 Q31302	0/45 0/45 0/45	1 1 1	3 lots 0/135	Pass
Test Group A – Accelerated Environment Stress Tests - 10MSOP - Unisem							
HAST	AEC-Q100, JESD22-A110 130°C, 85%RH Vcc=3.6V, 96 hours	3 lots, N=>77	Q29019 Q29022 Q29163	0/80 0/77 0/78	1 1 1	3 lots 0/235	Pass
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q052590 Q052593 Q052600	0/78 0/80 0/79	1 1 1	3 lots 0/237	Pass
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q052591 Q052598 Q052601	0/80 0/79 0/80	1 1 1	3 lots 0/239	Pass
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q045075 Q045076 Q045077	0/80 0/80 0/80	1 1 1	3 lots 0/240	Pass



Si401x-Cx-GS/GT/AS/AT Qualification Report

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Part Rev C2, TSMC Fabrication, Unisem 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 - 10MSOP - UTL							
HAST	AEC-Q100, JESD22-A110	3 lots, N=>77	Q31305	0/77	1		Pass
	130°C, 85%RH		Q31306	0/77	1	3 lots	
	Vcc=3.6V, 96 hours		Q31307	0/77	1	0/231	
UHAFT	AEC-Q100, JESD22-A102	3 lots, N=>77	Q31288	0/77	1		Pass
	130°C, 85%RH		Q31289	0/77	1	3 lots	
	96 hours		Q31290	0/77	1	0/231	
Temp Cycle	AEC-Q100, JESD22-A104	3 lots, N=>77	Q31294	0/77	1		Pass
	Cond C: -65°C to 150°C		Q31295	0/77	1	3 lots	
	500 cycles		Q31296	0/77	1	0/231	
HTSL	AEC-Q100, JESD22-A103	1 lot, N=>45	Q31301	0/45	1	1 lot 0/45	Pass
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	AEC-Q100, JESD22-A108	3 lots, N=>77	Q029729	0/80			Pass
	T _j ≥ 125°C, Dynamic		Q030319	0/80		3 lots	
	Vcc=3.6V, 1000 hours		Q030320	0/80		0/240	
LTOL	JA108	1 lot, N=>77	Q022643	0/80		1 lots 0/80	Pass
ELFR	AEC-Q100-008	3 lots, N=>800	Q029612	0/80			Pass
	T _j ≥ 125°C, Dynamic		Q030542	0/80		3 lots	
	Vcc=3.6V, 48 hours		Q030553	0/80		0/240	
Test Group C – Package Assembly Integrity Tests - 14SOIC - Unisem							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	454922	0/30			Pass
			458228	0/30		3 lots	
			454922	0/30		0/90	
Wire Bond Pull	AEC-Q100, M-STD-883 Performed post-TC	5 units, N=>30	454922	0/30			Pass
			458228	0/30		3 lots	
			454922	0/30		0/90	
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	454922	0/30			Pass
			458228	0/30		3 lots	
			454922	0/30		0/90	
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	454922	0/10			Pass
			458228	0/10		3 lots	
			454922	0/10		0/30	



Si401x-Cx-GS/GT/AS/AT Qualification Report

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Part Rev C2, TSMC Fabrication, Unisem Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group C – Package Assembly Integrity Tests - 14SOIC - ASECL							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	501633	0/30		3 lots	Pass
			505629	0/30			
			507053	0/30			
Wire Bond Pull	AEC-Q100, M-STD-883 Performed post-TC	5 units, N=>30	501633	0/30		3 lots	Pass
			505629	0/30			
			507053	0/30			
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	501633	0/30		3 lots	Pass
			505629	0/30			
			507053	0/30			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	501633	0/10		3 lots	Pass
			505629	0/10			
			507053	0/10			
Test Group C – Package Assembly Integrity Tests - 10MSOP - Unisem							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	458229	0/30		3 lots	Pass
			454931	0/30			
			456820	0/30			
Wire Bond Pull	AEC-Q100, M-STD-883 Performed post-TC	5 units, N=>30	Q052770	0/30		3 lots	Pass
			Q052771	0/30			
			Q052772	0/30			
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	979826	0/10		3 lots	Pass
			979827	0/10			
			979828	0/10			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	979826	0/15		3 lots	Pass
			979827	0/15			
			979828	0/15			
Test Group C – Package Assembly Integrity Tests - 10MSOP - UTL							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	1154038	0/30		3 lots	Pass
			1154039	0/30			
			1154040	0/30			
Wire Bond Pull	AEC-Q100, M-STD-883 Performed post-TC	5 units, N=>30	1154038	0/30		3 lots	Pass
			1154039	0/30			
			1154040	0/30			
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	1154038	0/30		3 lots	Pass
			1154039	0/30			
			1154040	0/30			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	1154038	0/10		3 lots	Pass
			1154039	0/10			
			1154040	0/10			



Si401x-Cx-GS/GT/AS/AT Qualification Report

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Part Rev C2, TSMC Fabrication, Unisem 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	Q029675			2 kV	Class 2
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q029674		2	TC 1000V	Class C3
			Q029730		3	TC 1000V	Class C3
			Q031287		4	TC 1000V	Class C3
			Q038543		5	TC 1000V	Class C3
Latch Up	AEC-Q100-004	1 lot, N=>6	Q29115			25 °C	Class I.A
	±200mA Overvoltage = 5.4V		Q29116			85 °C	Class I.A
Electromagnetic Compatibility	SAE J1752	1 lot, N=>1	Q030669				Pass

Notes:

1. Parts are Pre-conditioned at MSL2/260°C
2. Unisem 14SOIC
3. Unisem 10MSOP
4. ASECL 14SOIC
5. UTL 10MSOP

This report applies to the following part numbers:					
Si4010-C2-AT	Si4010-C1xxxAT	Si4010-C2xxxAT	Si4010-C2-Gx	Si4010-C2-Ax	Si4010-C2xxxGS
Si4010-C2xxxGT	Si4012-C1001GT	Si4012-C1001AT	Si4014-C1xxxGS	Si4014-C2xxxGS	



C8051Fxxx/CP21xx Qualification Report

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Unisem Gopeng Assembly - 28-SLP-5x5							
Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group A – Accelerated Environment Stress Tests							
UHAST	JA118		Q052666	0/30	1, 2		
	Cond A: 130°C, 85%RH	3 lots, N=>25	Q052670	0/30	1, 2	3 lots	Pass
	96 hours		Q052674	0/30	1, 2	0/90	
Temp Cycle	JA104		Q052666	0/30	1, 2		
	Cond C: -65°C to 150°C	3 lots, N=>25	Q052670	0/30	1, 2	3 lots	Pass
	500 cycles		Q052674	0/30	1, 2	0/90	
HTSL	JA103		Q052667	0/30	1, 2		
	150°C, 1000hr	3 lots, N=>25	Q052671	0/30	1, 2	3 lots	Pass
			Q052675	0/30	1, 2	0/90	

Notes:

1. Parts are pre-conditioned at MSL1/260°C
2. Uses Resonac EN4900GC PFAS-free die attach epoxy

This report applies to the following part numbers:		
C8051F311-GM	C8051F326-GM	CP2102-GM
C8051F313-GM	C8051F327-GM	CP2103-GM
C8051F315-GM	C8051F411-GM	
CP2110-F02-GM1	C8051F413-GM	



C8051F54x/5x/6x/7x AEC-Q100 Qualification Report

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Part Rev A, TSMC Fabrication, Unisem 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 - SPIL 32LQFP							
HAST	AEC-Q100, JESD22-A110 130°C, 85%RH Voc=5.25V, 96 hours	3 lots, N=>77	Q26065 Q25565 Q25562 Q25572 Q25669	0/80 0/80 0/80 0/80 0/80	4 4 4 1 1	5 lots 0/400	Pass
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q026063 Q025561 Q025571 Q025567 Q025667	0/123 0/80 0/80 0/80 0/79	4 4 4 1 1	5 lots 0/442	Pass
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q26067 Q26069 Q25560 Q25564 Q25574 Q25665	0/100 0/80 0/80 0/80 0/80 0/80	4 4 4 4 1 1	6 lots 0/500	Pass
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q26064 Q25566 Q25563 Q25573 Q25573	0/80 0/80 0/80 0/80 0/80	4 4 4 1 1	5 lots 0/400	Pass
Test Group A – Accelerated Environment Stress Tests - ASEKR 40QFN							
HAST	AEC-Q100, JESD22-A110 130°C, 85%RH Voc=5.25V, 96 hours	3 lots, N=>77	Q26608 Q26761 Q26811 Q25968 Q26017 Q26390	0/80 0/80 0/80 0/84 0/80 0/80	2 2 2 2 2 2	6 lots 0/484	Pass
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q26609 Q26760 Q26810 Q25971 Q26020 Q26387	0/80 0/84 0/80 0/80 0/80 0/80	2 2 2 2 2 2	6 lots 0/484	Pass
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q26606 Q26758 Q26809 Q25883 Q26019 Q26388	0/80 0/87 0/80 0/86 0/80 0/80	2 2 2 2 2 2	6 lots 0/493	Pass
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q26607 Q26759 Q26808 Q25972 Q26018 Q26389	0/81 0/83 0/82 0/78 0/83 0/83	2 2 2 2 2 2	6 lots 0/490	Pass



C8051F54x/5x/6x/7x AEC-Q100 Qualification Report

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Part Rev A, TSMC Fabrication, Unisem 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 - Unisem 24QFN							
HAFT	AEC-Q100, JESD22-A110 130°C, 85%RH Vcc=5.25V, 96 hours	3 lots, N=>77	Q26130	0/80	2	4 lots 0/319	Pass
			Q26179	0/80	2		
			Q25823	0/80	2		
			Q25877	0/79	2		
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q26128	0/80	2	7 lots 0/552	Pass
			Q26181	0/80	2		
			Q25825	0/80	2		
			Q25879	0/81	2		
			Q052881	0/77	2,8		
			Q052885	0/77	2,8		
Q052889	0/77	2,8					
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q26129	0/80	2	7 lots 0/551	Pass
			Q26182	0/80	2		
			Q25827	0/80	2		
			Q25878	0/80	2		
			Q052882	0/77	2,8		
			Q052886	0/77	2,8		
Q052890	0/77	2,8					
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q26131	0/84	2	7 lots 0/560	Pass
			Q26180	0/85	2		
			Q25817	0/80	2		
			Q25863	0/80	2		
			Q052883	0/77	2,8		
			Q052887	0/77	2,8		
Q052891	0/77	2,8					
Test Group A – Accelerated Environment Stress Tests - Unisem 32QFN							
HAFT	AEC-Q100, JESD22-A110 130°C, 85%RH Vcc=5.25V, 96 hours	3 lots, N=>77	Q26130	0/80	2	4 lots 0/320	Pass
			Q26179	0/80	2		
			Q26439	0/80	2		
			Q26394	0/80	2		
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q26128	0/80	2	4 lots 0/340	Pass
			Q26181	0/80	2		
			Q26442	0/100	2		
			Q26391	0/80	2		
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q26129	0/80	2	4 lots 0/340	Pass
			Q26182	0/80	2		
			Q26441	0/100	2		
			Q26392	0/80	2		
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q26131	0/84	2	4 lots 0/350	Pass
			Q26180	0/85	2		
			Q26440	0/101	2		
			Q26393	0/80	2		



C8051F54x/5x/6x/7x AEC-Q100 Qualification Report

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Part Rev A, TSMC Fabrication, Unisem 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 - ASECL 24QFN							
HAST	AEC-Q100, JESD22-A110 130°C, 85%RH Vcc=5.25V, 96 hours	3 lots, N=>77	Q29305 Q29331 Q29336	0/77 0/80 0/80	2 2 2	3 lots 0/237	Pass
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q29306 Q29310 Q29314	0/77 0/77 0/77	2 2 2	3 lots 0/231	Pass
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q29307 Q29311 Q29315	0/77 0/77 0/77	2 2 2	3 lots 0/231	Pass
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q29308 Q29312 Q29316	0/77 0/77 0/77	2 2 2	3 lots 0/231	Pass
Test Group A – Accelerated Environment Stress Tests - ASECL 32QFN							
HAST	AEC-Q100, JESD22-A110 130°C, 85%RH Vcc=5.25V, 96 hours	3 lots, N=>77	Q29385 Q29331 Q29336	0/78 0/80 0/80	2 2 2	3 lots 0/238	Pass
UHAST	AEC-Q100, JESD22-A102 130°C, 85%RH 96 hours	3 lots, N=>77	Q29386 Q29390 Q29394	0/77 0/77 0/77	2 2 2	3 lots 0/231	Pass
Temp Cycle	AEC-Q100, JESD22-A104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q29387 Q29391 Q29395	0/77 0/77 0/77	2 2 2	3 lots 0/231	Pass
HTSL	AEC-Q100, JESD22-A103 150°C, 1000hr	1 lot, N=>45	Q29388 Q29392 Q29396	0/77 0/77 0/77	2 2 2	3 lots 0/231	Pass
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	AEC-Q100, JESD22-A108 TJ ≥ 125°C, Dynamic Vcc=5.25V, 1000 hours	3 lots, N=>77	Q30438 Q30032 Q30323 Q30531	0/65 0/108 0/106 0/127	3 3 3	4 lots 0/426	Pass
LTOL	JA108 -10°C, Dynamic Vcc=5.25V, 1000 hours	1 lot, N=>77	Q25472	0/45	3	1 lots 0/45	Pass
ELFR	AEC-Q100-008 TJ ≥ 125°C, Dynamic Vcc=5.25V, 48 hours	3 lots, N=>800	Q30401 Q29991 Q30539 Q30331	0/818 0/863 0/860 0/860	3 3 3 3	4 lots 0/3401	Pass
NVM Endurance, Retention and Operating Life	AEC-Q100-005 25°C	3 lots, N=>38	Q25927 Q26191 Q26193 Q26473	0/40 0/40 0/40 0/40	3 3 3 3	4 lots 0/160	Pass
NVM Endurance, Retention and Operating Life	AEC-Q100-005 125°C	3 lots, N=>39	Q25973 Q26192 Q26194 Q26474	0/40 0/40 0/40 0/40	3 3 3 3	4 lots 0/160	Pass



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Part Rev A, TSMC Fabrication, Unisem Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
Test Group C – Package Assembly Integrity Tests - SPIL 32LQFP							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	372498.1	0/30		3 lots 0/90	Pass
			385172.1	0/30			
			386738.1	0/30			
Wire Bond Pull	AEC-Q006, M-STD-883 Performed post-TC	5 units, N=>30	372498.1	0/30		3 lots 0/90	Pass
			385172.1	0/30			
			386738.1	0/30			
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	372498.1	0/30		3 lots 0/90	Pass
			385172.1	0/30			
			386738.1	0/30			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	372498.1	0/10		3 lots 0/30	Pass
			385172.1	0/10			
			386738.1	0/10			
Test Group C – Package Assembly Integrity Tests - ASEKR 40QFN							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	386739.1	0/30		3 lots 0/90	Pass
			384238.1	0/30			
			431356.1	0/30			
Wire Bond Pull	AEC-Q006, M-STD-883 Performed post-TC	5 units, N=>30	386739.1	0/30		3 lots 0/90	Pass
			384238.1	0/30			
			431356.1	0/30			
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	386739.1	0/30		3 lots 0/90	Pass
			384238.1	0/30			
			431356.1	0/30			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	386739.1	0/10		3 lots 0/30	Pass
			384238.1	0/10			
			431356.1	0/10			

Test Group C – Package Assembly Integrity Tests - Unisem 24QFN

Wire Bond Shear	AEC-Q100-001	5 units, N=>30	372530.1	0/30		3 lots 0/90	Pass
			384238.1	0/30			
			372515.1	0/30			
Wire Bond Pull	AEC-Q006, M-STD-883 Performed post-TC	5 units, N=>30	372530.1	0/30		6 lots 0/180	Pass
			384238.1	0/30			
			372515.1	0/30			
			Q052915	0/30	8		
			Q052916	0/30	8		
			Q052917	0/30	8		
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	372530.1	0/30		3 lots 0/90	Pass
			384238.1	0/30			
			372515.1	0/30			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	372530.1	0/10		3 lots 0/30	Pass
			384238.1	0/10			
			372515.1	0/10			



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Part Rev A, TSMC Fabrication, Unisem Assembly except as noted							
Test Name	Test Condition	Qualification	Lot ID of Start	Fail/Pass of End	Notes	Summary	Status
Test Group C – Package Assembly Integrity Tests - Unisem 32QFN							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	372530.1	0/30		3 lots 0/90	Pass
			384236.1	0/30			
			372515.1	0/30			
Wire Bond Pull	AEC-Q006, M-STD-883 Performed post-TC	5 units, N=>30	372530.1	0/30		3 lots 0/90	Pass
			384236.1	0/30			
			372515.1	0/30			
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	372530.1	0/30		3 lots 0/90	Pass
			384236.1	0/30			
			372515.1	0/30			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	372530.1	0/10		3 lots 0/30	Pass
			384236.1	0/10			
			372515.1	0/10			
Test Group C – Package Assembly Integrity Tests - ASECL 24QFN							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	429752.1	0/30		3 lots 0/90	Pass
			432948.1	0/30			
			432949.1	0/30			
Wire Bond Pull	AEC-Q006, M-STD-883 Performed post-TC	5 units, N=>30	429752.1	0/30		3 lots 0/90	Pass
			432948.1	0/30			
			432949.1	0/30			
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	429752.1	0/30		3 lots 0/90	Pass
			432948.1	0/30			
			432949.1	0/30			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	429752.1	0/10		3 lots 0/30	Pass
			432948.1	0/10			
			432949.1	0/10			
Test Group C – Package Assembly Integrity Tests - ASECL 32QFN							
Wire Bond Shear	AEC-Q100-001	5 units, N=>30	435316.1	0/30		3 lots 0/90	Pass
			435989.1	0/30			
			436353.1	0/30			
Wire Bond Pull	AEC-Q006, M-STD-883 Performed post-TC	5 units, N=>30	435316.1	0/30		3 lots 0/90	Pass
			435989.1	0/30			
			436353.1	0/30			
Physical Dimensions	AEC-Q100, JESD-B100	3 lots, N=>10	435316.1	0/30		3 lots 0/90	Pass
			435989.1	0/30			
			436353.1	0/30			
Solderability	AEC-Q100, J-STD-002	1 lot, N=>15	435316.1	0/10		3 lots 0/30	Pass
			435989.1	0/10			
			436353.1	0/10			



C8051F54x/5x/6x/7x AEC-Q100 Qualification Report

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Part Rev A, TSMC Fabrication, Unisem 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	Q30581			2.5 kV	Class 2
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q30580			TC 1.25kV	Class C3
Latch Up	AEC-Q100-004	1 lot, N=>8	Q30582		6	130 °C	Class II.A
	±200mA		Q30583		5	130 °C	Class II.A
	Overvoltage = 7.875V		Q30584		6	25 °C	Class I.A
			Q30585		5,7	25 °C	Class I.A
Electromagnetic Compatibility	SAE J1752	1 lot, N=>1	Q28542		40 QFN		Pass
			Q28541		32 LQFP		

Notes:

1. Parts are Pre-conditioned at MSL2/260°C
2. Parts are Pre-conditioned at MSL1/260°C
3. Added by similarity from derivative devices
4. Parts are Pre-conditioned at MSL3/260°C
5. Performed with Vreg enabled
6. Performed with Vreg disabled
7. Bypass capacitor on VIO pin required to pass ±200mA; without cap, device latches up below -120mA
8. Unisem Gopeng

This report applies to the following part numbers:

C8051F540-IM	C8051F560-IM	C8051F540-IQ	C8051F540-AM	C8051F560-AM	C8051F540-AQ
C8051F541-IM	C8051F561-IM	C8051F541-IQ	C8051F541-AM	C8051F561-AM	C8051F541-AQ
C8051F542-IM	C8051F562-IM	C8051F542-IQ	C8051F542-AM	C8051F562-AM	C8051F542-AQ
C8051F543-IM	C8051F563-IM	C8051F543-IQ	C8051F543-AM	C8051F563-AM	C8051F543-AQ
C8051F544-IM	C8051F564-IM	C8051F544-IQ	C8051F544-AM	C8051F564-AM	C8051F544-AQ
C8051F545-IM	C8051F565-IM	C8051F545-IQ	C8051F545-AM	C8051F565-AM	C8051F545-AQ
C8051F546-IM	C8051F566-IM	C8051F546-IQ	C8051F546-AM	C8051F566-AM	C8051F546-AQ
C8051F547-IM	C8051F567-IM	C8051F547-IQ	C8051F547-AM	C8051F567-AM	C8051F547-AQ
C8051F550-IM	C8051F568-IM	C8051F550-IQ	C8051F550-AM	C8051F568-AM	C8051F550-AQ
C8051F551-IM	C8051F569-IM	C8051F551-IQ	C8051F551-AM	C8051F569-AM	C8051F551-AQ
C8051F552-IM	C8051F570-IM	C8051F552-IQ	C8051F552-AM	C8051F570-AM	C8051F552-AQ
C8051F553-IM	C8051F571-IM	C8051F553-IQ	C8051F553-AM	C8051F571-AM	C8051F553-AQ
C8051F554-IM	C8051F572-IM		C8051F554-AM	C8051F572-AM	
C8051F555-IM	C8051F573-IM		C8051F555-AM	C8051F573-AM	
C8051F556-IM	C8051F574-IM		C8051F556-AM	C8051F574-AM	
C8051F557-IM	C8051F575-IM		C8051F557-AM	C8051F575-AM	

Si4x3x / Si4313 AEC-Q100 Qualification Report



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Part Rev B, Jazz Fabrication, Unisem 20-QFN-4x4 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 - Unisem 20-QFN-4x4							
HAST	JA110 130°C, 85%RH Vcc=3.6V, 96 hours	3 lots, N=>77	Q028166 Q028167 Q028168	0/79 0/80 0/79	1 1 1	3 lots 0/238	Pass
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q028169 Q028170 Q028171 Q052907 Q052908 Q052909	0/80 0/80 0/80 0/80 0/80 0/80	1 1 1 1, 4 1, 4 1, 4	6 lots 0/480	Pass
HTSL	JA103 150°C, 1000hr	1 lot, N=>45	Q028172 Q052855	0/45 0/45	1 1, 4	2 lots 0/90	Pass
UHAST	JA110 130°C, 85%RH 96 hours	3 lots, N=>77	Q052853 Q052857 Q052861	0/78 0/80 0/80	1, 4 1, 4 1, 4	3 lots 0/238	Pass
Test Group A – Accelerated Environment Stress Tests - SPIL 20-QFN-4x4							
HAST	JA110 130°C, 85%RH Vcc=3.6V, 96 hours	3 lots, N=>77	Q031215 Q031217 Q031219	0/80 0/80 0/80	1, 2 1, 2 1, 2	3 lots 0/240	Pass
Temp Cycle	JA104 Cond C: -65°C to 150°C 500 cycles	3 lots, N=>77	Q031201 Q031203 Q031205	0/78 0/80 0/80	1, 2 1, 2 1, 2	3 lots 0/238	Pass
HTSL	JA103 150°C, 1000hr	1 lot, N=>45	Q031213	0/50	1, 2	1 lot 0/50	Pass
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	JA108 125°C, Dynamic Vcc=3.6V, 1000 hours	3 lots, N=>77	Q028163 Q028164 Q028165	0/85 0/85 0/85		3 lots 0/255	Pass
LTOL	JA108 -10°C, Dynamic Vcc=3.6V, 1000 hours	1 lot, N=>77	Q027156	0/80		1 lot 0/80	Pass
ELFR	AEC-Q100-008 125°C, Dynamic Vcc=3.6V, 48 hours	3 lots, N=>800	Q028118 Q028120 Q028523	0/808 0/808 0/818		3 lots 0/2434	Pass
Test Group E – Electrical Verification							
ESD-HBM	AEC-Q100-002	1 lot, N=>3	Q028124 Q028131		3		±1 kV ±2 kV

Approved by: Kelvin Lee

Prepared on : 02-Feb-26

Si4x3x / Si4313 AEC-Q100 Qualification Report



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Part Rev B, Jazz Fabrication, Unisem 20-QFN-4x4 Assembly except as noted

Test Name	Test Condition	Qualification	Lot ID or Start	Fail/Pass or End	Notes	Summary	Status
ESD-MM	AEC-Q100-003	1 lot, N=>3	Q028394 Q028132		3		±45 V ±150 V
ESD-CDM	AEC-Q100-011	1 lot, N=>3	Q028126 Q031199		2		±500 V ±750 V
Latch Up	AEC-Q100-004 ±200mA Overvoltage = 5.4V	1 lot, N=>6	Q028122 Q028123	25 °C 85 °C		2 lots 0/110	Pass
Gate Leakage	AEC-Q100-006	1 lot, N=>6	Q028121	0/8		1 lot 0/8	Pass

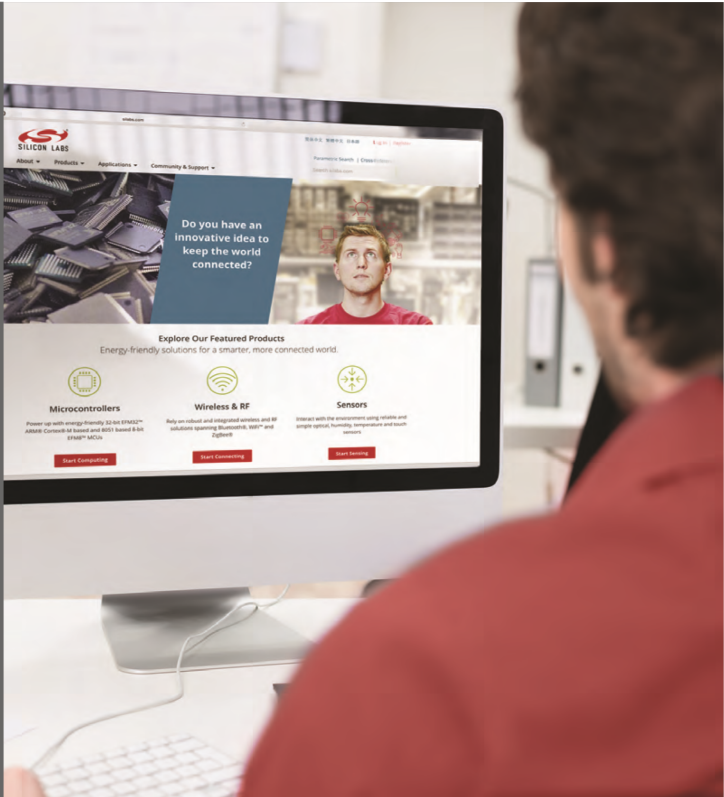
1. Parts are Pre-conditioned at MSL1/260°C
2. Qualification applies to SPIL 20-QFN-4x4 package
3. RF pins (#2, #3, #4) excluded
4. Qualification applies to Gopeng and PFAS free epoxy

This report applies to the following part numbers:

Si4030-A0-FM	Si4033-B2-FM	Si4430-A0-FM	Si4432-B0-FM
Si4030-B1-FM	Si4313-B1-FM	Si4430-B0-FM	Si4432-B1-FM
Si4031-A0-FM	Si4330-A0-FM	Si4430-B1-FM	Si4432-V2-FM
Si4031-B1-FM	Si4330-B1-FM	Si4431-A0-FM	Si4433-B2-FM
Si4032-B1-FM		Si4431-B0-FM	Si4434-B2-FM
Si4032-V2-FM		Si4431-B1-FM	

Approved by: Kelvin Lee

Prepared on : 02-Feb-26



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