

Product Change Notification

CN-2026042711I

Introduce Wss fab and additional assembly site Hisemi for SO14,16,20, include BoM and test location/equipment change

Change Category

- ☒ Wafer Fab Process

☐ Wafer Fab Materials

☒ Wafer Fab Location

☒ Test Location

☐ Test Process

☒ Test Equipment
- ☐ Assembly Process

☒ Assembly Materials

☒ Assembly Location

☐ Design

☐ Errata

☐ Electrical spec./Test coverage
- ☐ Product Marking

☐ Mechanical Specification

☐ Packing/Shipping/Labeling

Details of this change

Introduce Wss fab and additional new subcon Hisemi for SO14,16,20 package, and will use their mass production BoM, and change test location and equipment type (WT and FT).

change	Location	BOM change				
		EMC	Die attach	Wire	LF	Post Plating
From	ATXSZ	GR710	EN4900GC	Cu	Cu	Sn
To be	Hisemi	CEL-9220HF	EN-4900GC	AuPdCu20um SO14,16 AuPdCu25um SO20	Cu	Sn

change	Wafer test	Final Test
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	WT Location	Process	Equipment	FT Location	Process	Equipment
From	ATXSZ	No change	Magnum	ATXSZ	No change	Magnum
To be	HFHY		S100	HFHY		S100

- Qualification in accordance JEDEC
- No change in form, function, quality, workability and reliability anticipated
- No change in data sheet and test limits.
- No change in ordering code 12NC (sales part number).

Why do we implement this change?

- This is part of our long-term plan to move mature products from 8" to 12" foundries to advanced manufacturing processes and technologies.
- To create China to China supply chain, to ensure future supply and supply chain stability. We introduce Hisemi as new subcon for SO14,16,20 package.
- It is a commitment to portfolio longevity and supply continuity.
- New orders for the affected 12NCs will automatically be considered as acceptance of this PCN.
- If you do not agree with the changes described in this PCN, please let us know immediately and ensure no new orders for the affected products are placed. If we do not receive a response from you within thirty (30) days from the date of this PCN, we will assume that you accept the PCN.
- In case of a rejection of the PCN, Nexperia will reserve the right to cancel all open and confirmed orders related to the affected product(s) and as such a rejection may result in discontinuation of supply. Nexperia cannot be held liable for non-supply in such cases.
- This guarantee continued supply of products.

Identification of affected products

Assembly location identifier on Product Manufacturing Code (PMC) on reel and box labels code 2nd character represents the assembly location. "f" for Hisemi, "X" for ATXSZ.

Management summary

Introducing additional assembly site Hisemi, include BoM change, and changed the WT and FT location and test equipment.

Product availability

Sample information

PCN samples are available upon request via your Nexperia Sales Team or "www.nexperiastore.cn" from BG IC Solutions sample store in Nexperia.

Impact

- No change in form, function, quality, workability and reliability anticipated
- No change in data sheet and test limits
- No change in ordering code 12NC (sales part number)

Data sheet revision

No change on existing data sheet

Disposition of old products

Existing inventory will be shipped until depleted

Additional information

Remarks

Assembly location indicator suffix on the reel and box label:

"X" for ATXSZ(ATX Semiconductors, Suzhou China), "f" for Hisemi (Chizhou Hisemi Electronics Technology Co., Ltd)

PCN samples are available upon request via your Nexperia Sales Team or "www.nexperiastore.cn"

Affect Part number

Affected Sales Items	Part Number	Part Description
933713500653	74HC14D,653	74HC14D
933757190653	74HC245D,653	74HC245D
933714270653	74HC08D,653	74HC08D
933713560653	74HC573D,653	74HC573D
933757190653	74HC244D,653	74HC244D
933713360653	74HC00D,653	74HC00D
933714150653	74HC02D,653	74HC02D
935265567118	74HC574D,118	74HC574D
935265567118	74HC373D,118	74HC373D
933714550653	74HC273D,653	74HC273D
933757190653	74HC240D,653	74HC240D
935265567118	74HC541D,118	74HC541D
935265567118	74HC74D,118	74HC74D
933714260653	74HC04D,653	74HC04D
935265567118	74HC86D,118	74HC86D
933714570653	74HC21D,653	74HC21D
933714280653	74HC10D,653	74HC10D
933714290653	74HC11D,653	74HC11D
933748660653	74HC03D,653	74HC03D
933714550653	74HC30D,653	74HC30D
933714570653	74HC20D,653	74HC20D
935288148118	74HC05D,118	74HC05D
935692439118	FN74HC14D,118	FN74HC14D
935692439118	FN74HC164D,118	FN74HC164D
935265567118	74HC595D,118	74HC595D
933713400653	74HC138D,653	74HC138D
933713500653	74HC151D,653	74HC151D
933757190653	74HC238D,653	74HC238D
933714550653	74HC259D,653	74HC259D
933713500653	74HC157D,653	74HC157D
933713500653	74HC153D,653	74HC153D
933713500653	74HC139D,653	74HC139D
933714570653	74HC174D,653	74HC174D
933757190653	74HC237D,653	74HC237D
933713520653	74HC251D,653	74HC251D
933713500653	74HC166D,653	74HC166D
933714670653	74HC365D,653	74HC365D
933714690653	74HC367D,653	74HC367D
933757070653	74HC137D,653	74HC137D
935691800118	FN74HC165D,118	FN74HC165D

Qualification Report

Introduction WSS and additional new subcon Hisemi for SO14,16,20 packages, include BoM and test equipment change

Revision:20 Apr 2026

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Contact Information

For more information, please contact: contact sales directly

Table of Contents

1. Subject 8

2. Assy factory details 8

 2.1 Hisemi Group Co.,Ltd. China 8

 2.2 Wafer fab location and process 8

 2.3 Bond wire material and assembly location 8

3. Reliability test program 9

 3.1 Qualification strategy 9

4. Reliability Report..... 9

5. Electrical and thermal performance..... 10

 5.1 Electrical performance 10

 5.2 Thermal performance..... 10

6. Comparison of visual appearance 10

7. Traceability..... 11

8. Conclusion..... 11

9. Legal Disclaimer..... 11

1. Subject

This Qualification Report provides details of the qualification results according to the Nexperia General Quality Specification and in compliance with JESD47 to support PCN **CN-2026042711I**.

2. Factory details

2.1 Hisemi Group Co.,Ltd. China

Chizhou Huayu Electronic Technology Co., Ltd. was founded in October 2014. It is a high-end electronic information manufacturing enterprise specializing in integrated circuit packaging and testing, including integrated circuit packaging, wafer testing services, and finished chip testing services.

In the packaging field, the company possesses core technologies such as Multi-Chip Module (MCM) packaging, three-dimensional (3D) stacked die packaging, Ball Grid Array (BGA) packaging, Land Grid Array (LGA) packaging, Flip Chip (FCBGA, FCQFN) packaging, miniaturized Flat No-Lead (QFN/DFN) packaging, and high-density fine-pitch integrated circuit packaging.

Quality Systems: IATF 16949, ISO9001

2.2 Wingskysemi (WSS) Shanghai Dingtai Jiangxin Technology Co., Ltd. China

Shanghai Dingtai Jiangxin Technology Co., Ltd. (Wingskysemi) is one of the major projects in Shanghai with a total investment of more than 12 billion RMB. It is also the first 12-inch automotive grade semiconductor wafer fab in China. Wingskysemi in accordance with the international top standard construction and the introduction of standard production equipment to achieve a high degree of automation to create the world's super intelligent factory and research and development center. As said, the Nexperia products will be manufactured in WSS 12 inch wafer fab situated in Shanghai China. WSS has been certified for IATF 16949 since 2024.

2.3 Wafer fab location and process

No change in die, wafer fab locations and processes.

2.4 Bond wire material and assembly location

add Assembly location Hisemi.

See details BoM in below table.

change	Location	BOM change
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		EMC	Die attach	Wire	LF	Post Plating
From	ATXSZ	GR710	EN4900GC	Cu	Cu	Sn
To be	Hisemi	CEL-9220HF	EN-4900GC	AuPdCu20um SO14,16 AuPdCu25um SO20	Cu	Sn

3. Reliability test program

In line with the Nexperia General Quality Specification, an extensive qualification program was performed.

3.1 Qualification strategy

Based on Nexperia General Quality Specification standards Nexperia have evaluated the proposed change and determined the reliability tests needed to demonstrate that form, function, quality and reliability is unchanged.

The reliability test results are summarized in chapter 4. The qualification was carried out according to JESD47 and included extended read-points to show robustness.

4. Reliability Report

The qualification as reported in the embedded file below was carried out to release all product types mentioned in PCN [CN-2026042711I](#).

Qualification results SO14,SO16,SO20 package family assembled in Hisemi

AEC-Q100 Item #	ABV	Stress / Test	Conditions / Remarks	Readpoints	Test Method	Qual Product	Qual Product	Qual Product	QBS Product	QBS Product	QBS Product	Comments / Sample Size per lot
						74HC14D	74HC165D	74LVC245AD	LSF0102GX	LSF0102GX	LSF0102GX	
					Diffusion process Waferfab name	DTJX-C1100MB01-WSS		DTJX-C125DMB01-WSS	DTJX-C1100MB01-WSS	DTJX-C1100MB01-WSS	DTJX-C1100MB01-WSS	
					Die size (mm)	0.595 x 0.442	0.68*0.476	1.17*0.755	0.592 x 0.44	0.592 x 0.44	0.592 x 0.44	
					Package SOT	SO14	SO16	SO20	X2SON8	X2SON8	X2SON8	
					Wire	20um AuPDCu		25um AuPDCu	20um Au	20um Au	20um Au	
Accelerated Lifetime Simulation Tests (AEC-Q100)												
A1	PC	Pre-Conditioning	Before A2, A3 and A4	MSL 1	JESD22-A113 / J-STD-020	passed	passed	passed				all samples
A2	HAST	Biased HAST	110°C / 85% RH	264 hrs	JESD22-A110	0/77 0/77 0/77	0/77	0/77 0/77 0/77				77
A3	UHST	Unbiased HAST	110°C / 85% RH	264 hrs	JESD22-A110	covered by HAST	covered by HAST	covered by HAST				77
A4	TC	Temperature Cycling	Ta = -65°C to 150°C	500 1000 cls	JESD22-A104	0/77 0/77 0/77	0/77	0/77 0/77 0/77				77
A6	HTSL	High Temperature Storage Life	Ta = 150°C	1000 hrs	JESD22-A103	0/45	0/45	0/45				45
B1	HTOL	High Temperature Operating Life	Tj = 150°C	500 1000 hrs	JESD22-A108				0/77	0/77	0/77	77
B2	ELFR	Early Life Failure Rate	Tj = 150°C	48 hrs	AEC-Q100-008				0/800	0/800	0/800	800
D1	EM	Electromigration	Process release		JESD63	process released	process released	process released				
D2	TDD8	Time Dependent Dielectric Breakdown	Process release		JESD92	process released	process released	process released				
D3	HCI	Hot Carrier Injection	Process release		JESD28	process released	process released	process released				
D4	NBTI	Bias Temperature Instability	Process release		JESD90	process released	process released	process released				
D5	SM	Stress Migration	Process release		JEP139	process released	process released	process released				
Package Assembly Integrity Tests (AEC-Q100)												
	MSLA	Moisture Sensitivity Level Assessment	MSL 1	MSL 1	JESD22-A113E / J-STD-020	0/15	0/15	0/15				14
C1	WBS	Wire Bond Shear	0-hr product	50 bonds from a min. of 5 dev.	JESD22-B116	passed	passed	passed				5
C2	WBP	Wire Bond Pull Strength	0-hr product	50 bonds from a min. of 5 dev.	JESD22-B115	passed	passed	passed				5
C3	SD	Solderability	0-hr product	>95% Lead Coverage	JESD22-B102	passed	passed	passed				11
C4	PD	Physical Dimensions	0-hr product	Package drawing	JESD22-B100 and B108	package released	package released	package released				30
Electrical Verification Tests (AEC-Q100)												
E2	HBM	ESD Human Body Model	Waveform according to spec.	2000V all pins	AEC-Q100-002				0/3			3
E3	CDM	ESD Charged Device Model	Waveform according to spec.	1000V all pins	AEC-Q100-011 / Q101-005				0/3			3
E4	LU	Latch-Up	Nexperia Requirement	> 100 mA @ Tj	AEC-Q100-004				0/3			3
E5	ED	Electrical Distribution	Test at Room	CPK ≥ 1.67	AEC-Q100-009	0/30	0/30	0/30				30
E7	CHAR	Characterization	Nexperia Requirement		AEC-Q003	released	released	released				
Physical & Construction Analysis												
Construction	V/M	Visual / Mechanical Inspection	0-hr product		XWI-0028	package released	package released	package released				15
Analysis	LFNH	Lead Finish Inspection	0-hr product		XWI-0028	package released	package released	package released				9
	TENS	Tensile Lead Stress	0-hr product		XWI-0022	package released	package released	package released				3
	MARK	Marking Quality	0-hr product		XWI-0028	package released	package released	package released				12
	XRAY	X-ray Inspection	0-hr product		XWI-0033	package released	package released	package released				10
	SCAT	SCAT Inspection	0-hr product		IPC/JEDEC J-STD-035	Passed	Passed	Passed				14
	DISH	Die Shear	0-hr product		MIL-Std-883 method 2019.7	package released	package released	package released				5
	DECAP	Decap Inspection	0-hr product		XWI-0212	package released	package released	package released				3
	Cratering	Cratering Test	0-hr product		XPR-0104	package released	package released	package released				2
	CROSS	Cross Section	0-hr product		XWI-0016	package released	package released	package released				3

Notes:

not relevant for QBS or test not executed for Qual Product

5. Electrical and thermal performance

5.1 Electrical performance

- Electrical performance Electrical parameters remain unchanged (No change of dies), and all parameters Cpk > 1.67 at 25°C w.r.t. datasheet limits.

5.2 Thermal performance

No application.

6. Comparison of visual appearance

There will be no change in visual appearance.

7. Traceability

The traceability is given by the diffusion fab location indicator (identifier) which is indicated on the reel and box labels: "f"= Hisemi (Chizhou Hisemi Electronics Technology Co., Ltd)

8. Conclusion

Based on the reliability qualification results, the SO14,16,20 inHisemi can be released via PCN **CN-2026042711I**. The results comply with the requirements for product release to Non-automotive market.

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