Final Product/Process Change Notification

Document #:FPCN25572Z18
Issue Date: 28 Jan 2024

Title of Change:	Update to **FPCN25572Z** - To include the reliability data of SOIC-14 package for the Qualification of Vanguard Fab and Assembly related changes for Logic parts.
Proposed Changed Material First Ship Date:	31 Jul 2024 or earlier if approved by customer
Current Material Last Order Date:	20 Nov 2023 *Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability***.**
Current Material Last Delivery Date:	N/A *The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory*
Product Category:	Active components – Integrated circuits
Contact information:	Contact your local onsemi Sales Office or logic.fpcn@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office to place sample order. Sample requests are to be submitted no later than 45 days after publication of this change notification. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Sample Availability Date:	31 Mar 2024
PPAP Availability Date:	26 Feb 2024
Additional Reliability Data:	Contact your local onsemi Sales Office or ChangKit.Mok@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. onsemi will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com.

Change Category

Category	**Type of Change**
Process - Wafer Production	Move of all or part of wafer fab to a different location/site/subcontractor, New wafer diameter
Equipment	Production from a new equipment/tool which uses a different basic technology or which due to its unique form or function can be expected to influence the integrity of the final product
Data Sheet	Change of datasheet parameters/electrical specification (min./max./typ. values) and/or AC/DC specification
Process - Assembly	Move of all or part of assembly to a different location/site/subcontractor., Change of mold compound, Die attach material, Change of leadframe base material, Change of wire bonding

Description and Purpose:

With reference to **FPCN25572Z**, this FPCN presents the information solely for SOIC-14 package parts and the pertinent reliability data.

	From	To
Fab Site	Tower Semiconductor	Vanguard International Semiconductor (VIS)
Wafer size	150 mm	200 mm

	From	To		
Assembly Site	onsemi Carmona	onsemi Carmona	Hana Micro.	ATX Kunshan
LeadFrame	Cu with Ag spot	Cu with Ag spot	PPF	Cu with Ag spot
Bond Wire	0.8 mil Au, 0.8 mil Cu	1 mil PCC	1 mil PCC	1 mil PCC
Die Attach	CRM-1076WB	CRM-1076WB	CRM-1076WB	EN4900GC
Mold Compound	G600	G600	G600	CEL9240HF10AK

- **Case outline drawing update:**

	From	To
Case Outline Document	CASE 751EF / CASE 751A-03	CASE 751A

Reason / Motivation for Change:	Source/Supply/Capacity Changes Process/Materials Change
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by onsemi in relation to the PCN, associated risks are verified and excluded. No anticipated impacts.

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
onsemi Carmona, Philippines	ATX Kun Shan, China
	HANA Semiconductor, Thailand
	Vanguard International Semiconductor, Taiwan

Marking of Parts/ Traceability of Change:	Custom source on label will show TW instead of US/IL to indicate new die source from Vanguard. Changed material may be identified by plant code or lot code too.

Reliability Data Summary:

- **Refer to embedded excel RMS O89379, O89388, and O89394.**

To view attachments:
1. Download pdf copy of the PCN to your computer
2. Open the downloaded pdf copy of the PCN
3. Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field
4. Then click on the attached file.

Electrical Characteristics Summary:

	From	To
Datasheet	Current Revision	New Revision
Absolute Max Voltage Rating	7.0 V	6.5 V

List of Affected Parts:

Note: *Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the* ***PCN Customized Portal****.*

Current Part Number	New Part Number	Qualification Vehicle
NLV74AC00DR2G	MC74AC00DR2G-Q	MC74LCX14DR2G
NLV74AC08DR2G	MC74AC08DR2G-Q	MC74LCX14DR2G
NLV74AC14DR2G	MC74AC14DR2G-Q	MC74LCX14DR2G
NLV74AC32DR2G	MC74AC32DR2G-Q	MC74LCX14DR2G
NLV74AC74DR2G	MC74AC74DR2G-Q	MC74LCX14DR2G
NLV74ACT00DR2G	MC74ACT00DR2G-Q	MC74LCX14DR2G
NLV74ACT02DR2G	MC74ACT02DR2G-Q	MC74LCX14DR2G
NLV74ACT125DR2G	MC74ACT125DR2G-Q	MC74LCX14DR2G
NLV74HC00ADR2G	MC74HC00ADR2G-Q	MC74LCX14DR2G
NLV74HC02ADR2G	MC74HC02ADR2G-Q	MC74LCX14DR2G
NLV74HC04ADR2G	MC74HC04ADR2G-Q	MC74LCX14DR2G
NLV74HC08ADR2G	MC74HC08ADR2G-Q	MC74LCX14DR2G
NLV74HC11ADR2G	MC74HC11ADR2G-Q	MC74LCX14DR2G
NLV74HC125ADR2G	MC74HC125ADR2G-Q	MC74LCX14DR2G
NLV74HC126ADR2G	MC74HC126ADR2G-Q	MC74LCX14DR2G
NLV74HC132ADR2G	MC74HC132ADR2G-Q	MC74LCX14DR2G
NLV74HC14ADR2G	MC74HC14ADR2G-Q	MC74LCX14DR2G

NLV74HC164ADR2G	MC74HC164ADR2G-Q	MC74LCX14DR2G
NLV74HC20ADR2G	MC74HC20ADR2G-Q	MC74LCX14DR2G
NLV74HC32ADG	MC74HC32ADG-Q	MC74LCX14DR2G
NLV74HC32ADR2G	MC74HC32ADR2G-Q	MC74LCX14DR2G
NLV74HC393ADR2G	MC74HC393ADR2G-Q	MC74LCX14DR2G
NLV74HC73ADR2G	MC74HC73ADR2G-Q	MC74LCX14DR2G
NLV74HC74ADR2G	MC74HC74ADR2G-Q	MC74LCX14DR2G
NLV74HC86ADR2G	MC74HC86ADR2G-Q	MC74LCX14DR2G
NLV74HCT125ADR2G	MC74HCT125ADR2G-Q	MC74LCX14DR2G
NLV74HCT132ADR2G	MC74HCT132ADR2G-Q	MC74LCX14DR2G
NLV74HCT14ADR2G	MC74HCT14ADR2G-Q	MC74LCX14DR2G
NLV74HCT74ADR2G	MC74HCT74ADR2G-Q	MC74LCX14DR2G
NLV74VHC125DR2G	MC74VHC125DR2G-Q	MC74LCX14DR2G
NLV74VHC126DR2G	MC74VHC126DR2G-Q	MC74LCX14DR2G
NLVHCT14ADR2G	MC74HCT14ADR2G-Q	MC74LCX14DR2G
NLVHC86ADR2G	MC74HC86ADR2G-Q	MC74LCX14DR2G
NLVACT14DR2G	MC74ACT14DR2G-Q	MC74LCX14DR2G
NLV74VHCT14DR2G	MC74VHCT14DR2G-Q	MC74LCX14DR2G
NLV74VHC32DR2G	MC74VHC32DR2G-Q	MC74LCX14DR2G
NLV74HCU04ADR2G	MC74HCU04ADR2G-Q	MC74LCX14DR2G
NLV74HCT04ADR2G	MC74HCT04ADR2G-Q	MC74LCX14DR2G
NLV74HC03ADR2G	MC74HC03ADR2G-Q	MC74LCX14DR2G