



Final Product/Process Change Notification

Document #:FPCN25572X45

Issue Date:21 Feb 2025

Title of Change:	Update to FPCN25572X - To include reliability data for onsemi Carmona LCX series TSSOP 20 packaged parts for the qualification of Vanguard Fab and Assembly related changes for Logic Parts.
Proposed First Ship date:	28 May 2025 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or logic.fpcn@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Additional Reliability Data:	Contact your local onsemi Sales Office.
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. onsemi will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com
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.
Change Category:	Test Change, Assembly Change, Wafer Fab Change
Change Sub-Category(s):	Shipping/Packaging/Marking, Material Change, Manufacturing Site Addition, Datasheet/Product Doc change

Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
onsemi Carmona, Philippines	ATEC - Automated Technology, Philippines
	Vanguard International Semiconductor, Taiwan

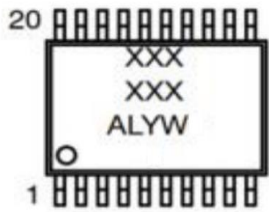
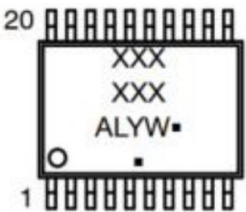
Description and Purpose:

With reference to **FPCN25572X**, this FPCN presents the information solely for TSSOP20 pertinent reliability data.

	From	To
Fab Site	Tower Semiconductor	Vanguard International
Wafer Size	150 mm	200mm

	From	To	
Assembly Site	onsemi Carmona	onsemi Carmona	Automated Technology, Philippines (ATEC)
Test Site	onsemi Carmona	onsemi Carmona	Automated Technology, Philippines (ATEC)
Leadframe Flag size	2.108X3.048	0.940 x 1.295	2.5 x 2.5
Bond Wire	0.8 mil Au	1 mil PCC	1 mil PCC

Marking Change for 74LCX541MTCX and 74LCX541MTC

	From	To
Marking Changes	 XXXXX = Specific Device Code A = Assembly Location L = Wafer Lot Y = Year of Production W = Work Week Number	 XXXXX = Specific Device Code A = Assembly Location L = Wafer Lot Y = Year of Production W = Work Week Number ■ = Pb-Free Indicator (Note: Microdot may be in either location)

Reliability Data Summary:

QV DEVICE NAME : NLV74HC244ADTR2G

RMS : O89401

PACKAGE : TSSOP20

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta=150°C	1008 hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @260°C, Pre TC, uHAST, HAST for surface mount pkgs only	-	0/693
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/231
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-	0/30



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QV DEVICE NAME : NLV74HC244ADTR2G
RMS : O89395
PACKAGE : TSSOP20

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/77
High Temperature Storage Life	JESD22-A103	Ta=150°C	1008 hrs	0/77
Preconditioning	J-STD-020 JESD-A113	MSL 1 @260°C, Pre TC, uHAST, HAST for surface mount pkgs only	-	0/231
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/77
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/77
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/77
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-	0/10

Electrical Characteristics Summary:

Please see attached powerpoint presentation for the electrical characteristic changes.

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.

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](#).

Part Number	Qualification Vehicle
MC74LCX245DTR2G	NLV74HC244ADTR2G
MC74LCX541DTR2G	NLV74HC244ADTR2G
MC74LCX240DTR2G	NLV74HC244ADTR2G
74LCX541MTCX	NLV74HC244ADTR2G
MC74LCX573DTR2G	NLV74HC244ADTR2G
74LCX541MTC	NLV74HC244ADTR2G
MC74LCX574DTR2G	NLV74HC244ADTR2G
MC74LCX573DTG	NLV74HC244ADTR2G
MC74LCX541DTG	NLV74HC244ADTR2G
MC74LCX245DTG	NLV74HC244ADTR2G