



Final Product/Process Change Notification

Document #:FPCN25572X44

Issue Date:30 Jan 2025

Title of Change:	Update to FPCN25572X - To include the reliability data for wQFN20 and QFN20 packaged parts for the Qualification of Vanguard Fab and Assembly related changes for Logic Parts.
Proposed First Ship date:	07 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/JP 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):	Manufacturing Site Transfer, Datasheet/Product Doc change, Material Change, Shipping/Packaging/Marking

Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
onsemi Tarlac, Philippines	Vanguard International Semiconductor, Taiwan

Description and Purpose:

With reference to **FPCN25572X**, this FPCN presents the information solely for QFN20 and wQFN20 and the pertinent reliability data.

	From		To
Fab Site	Tower Semiconductor	Diodes Incorporated (Diodes)	Vanguard International Semiconductor (VIS)
Wafer Size	150 mm	200 mm	200 mm

Assembly and test changes as shown in the table below:

wQFN20 4.5 x 2.5 (74LCX245BQX)

	From	To
Assembly Site	HANA	onsemi Tarlac, Philippines
Test Site	HANA	onsemi Tarlac, Philippines
Die Attach	ABLETHERM 8600	CRM-1076WB
Bond Wire	Au	PCC
Mold Compound	CEL9220HF13H	EME-G770HM Type D

QFN20 2.5 x 4.5 (MC74LCX245MNTWG)

	From	To
Assembly Site	Stars	onsemi Tarlac, Philippines
Test Site	Stars	onsemi Tarlac, Philippines
Die Attach	HR-5104	CRM-1076WB
Bond Wire	0.8 mil Au	1 mil PCC
Mold Compound	EME G700LTD	EME-G770HM Type D

Marking Change

For 74LCX245BQX only

	From	To
Marking	<p>Z = ASSY Plant Code XY = Two Digit Date Code Format (Year & Week) KK = Two Digit Lot Run Traceability Code X = Device Code</p>	<p>X = Device Code A = Assembly Site L = Wafer Lot Number Y = Year of Production, Last Number WW = Work Week Number</p>

Reliability Data Summary:

QV DEVICE NAME : NLV68SZ126MN2TWG

RMS : S89442

PACKAGE : QFN20

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	MSL1@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 : 74LCX244BQX
RMS : S89448 / S96581
PACKAGE : WQFN20

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	MSL1@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:

NOTE: See embedded pdf file for 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
74LCX245BQX	74LCX244BQX
MC74LCX245MNTWG	NLV68SZ126MN2TWG