



# Final Product/Process Change Notification

Document #:FPCN25572X25

Issue Date: 31 Jan 2024

<b>Title of Change:</b>	Update to <b>FPCN25572X</b> - To include the reliability data of uDFN8 for the Qualification of Vanguard Fab and Assembly related changes for Logic parts.
<b>Proposed First Ship date:</b>	07 May 2024 or earlier if approved by customer
<b>Contact Information:</b>	Contact your local onsemi Sales Office or <a href="mailto:logic.fpcn@onsemi.com">logic.fpcn@onsemi.com</a>
<b>PCN Samples Contact:</b>	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.
<b>Additional Reliability Data:</b>	Contact your local onsemi Sales Office or <a href="mailto:ChangKit.Mok@onsemi.com">ChangKit.Mok@onsemi.com</a>
<b>Type of Notification:</b>	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 <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a>
<b>Marking of Parts/ Traceability of Change:</b>	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.
<b>Change Category:</b>	Wafer Fab Change, Assembly Change, Test Change
<b>Change Sub-Category(s):</b>	Manufacturing Site Transfer, Datasheet/Product Doc change
<b>Sites Affected:</b>	
<b>onsemi Sites</b>	<b>External Foundry/Subcon Sites</b>
onsemi Tarlac, Philippines	Vanguard International Semiconductor, Taiwan

## Description and Purpose:

With reference to **FPCN25572X**, this FPCN presents the information solely for uDFN8 package.

### ➤ uDFN8 1.45\*1.0:

	From	To
<b>Fab Site</b>	TPSCo	Vanguard
<b>Assembly Site</b>	onsemi Seremban, onsemi Tarlac	onsemi Tarlac
<b>Test Site</b>	onsemi Seremban, onsemi Tarlac	onsemi Tarlac
<b>Lead Frame</b>	PPF	LF PPF PLATED (C7025)

### ➤ uQFN8 1.6\*1.6:

	From	To
<b>Fab Site</b>	Tower, TPSCo	Vanguard
<b>Wafer Diameter</b>	6 inch, 8 inch	8 inch
<b>Assembly Site</b>	onsemi Seremban, ATX Shanghai, AMKOR, onsemi Tarlac	onsemi Tarlac
<b>Test Site</b>	onsemi Seremban, onsemi Tarlac	onsemi Tarlac
<b>Mold Compound</b>	G760, G631H, G700Y, EME-G770HM, EME-G760	SUMITOMO EME-G760
<b>Wire Type</b>	Au or PCC	PCC
<b>Lead Frame</b>	PPF, Rough PPF, Rough PPF	LF PPF PLATED (C7025)
<b>Die Attach</b>	8006NS, ATB-F125E, NEX-130CTX-N5	WBC 8006NS



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## Reliability Data Summary:

**QV DEVICE NAME: NL17SZ08MU1TCG**

**RMS: S87094 / S87719**

**PACKAGE: uDFN6**

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hours	0/231
Earlier Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hours	0/2400
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hours	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 cycles	0/231
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hours	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hours	0/231
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-	0/30

**QV DEVICE NAME: NL27WZ17MU1TCG**

**RMS: S87316**

**PACKAGE: uDFN6**

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hours	0/77
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hours	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 cycles	0/77
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hours	0/77
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hours	0/77
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-	0/10

**QV DEVICE NAME: MC74VHC3G14MU3TCG**

**RMS: S87889**

**PACKAGE: uDFN8**

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hours	0/77
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hours	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 cycles	0/77
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hours	0/77
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hours	0/77
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-	0/10



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### Electrical Characteristics Summary:

Electrical characteristics available upon request.

### 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	New Part Number	Qualification Vehicle
NL27WZ86MQ1TCG	#NONE	NL17SZ08MU1TCG, NL27WZ17MU1TCG, MC74VHC3G14MU3TCG
NLX2G86MUTCG	NL27WZ86MQ1TCG	NL17SZ08MU1TCG, NL27WZ17MU1TCG, MC74VHC3G14MU3TCG
NL27WZ08MQ1TCG	#NONE	NL17SZ08MU1TCG, NL27WZ17MU1TCG, MC74VHC3G14MU3TCG
NL17SZ74MQ1TCG	#NONE	NL17SZ08MU1TCG, NL27WZ17MU1TCG, MC74VHC3G14MU3TCG
NLX1G74MUTCG	#NONE	NL17SZ08MU1TCG, NL27WZ17MU1TCG, MC74VHC3G14MU3TCG