Final Product/Process Change Notification

Document #:FPCN25572XA1
Issue Date: 06 Feb 2024

Title of Change:	Update to **FPCN25572XA** - Datasheet Update for NC7WZ14P6X Qualification of Vanguard Fab and Some Assembly Related Changes for Logic part.
Proposed First Ship date:	07 Feb 2024 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 or ChangKit.Mok@onsemi.com
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:	Wafer Fab Change
Change Sub-Category(s):	Datasheet/Product Doc change, Manufacturing Site Transfer

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
None	Vanguard International Semiconductor, Taiwan

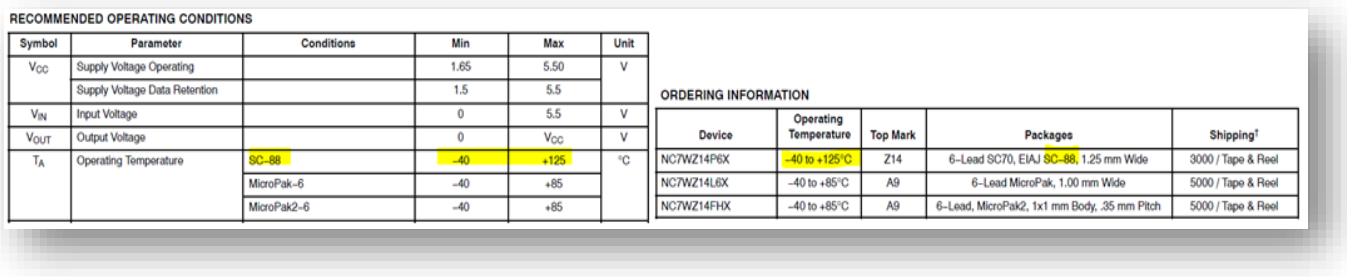
Description and Purpose:

With reference to **FPCN25572XA**, this FPCN provides update for the replacement part of **NC7WZ14EP6X**.

Part **NC7WZ14P6X** is now rated from -40 to 125C and will replace part **NC7WZ14EP6X** since both parts now have equal performance over the same temperature range.

MPN	Replacement part
NC7WZ14EP6X	NC7WZ14P6X

New Datasheet for NC7WZ14P6X:



RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Conditions	Min	Max	Unit
V_{CC}	Supply Voltage Operating		1.65	5.50	V
	Supply Voltage Data Retention		1.5	5.5	
V_{IN}	Input Voltage		0	5.5	V
V_{OUT}	Output Voltage		0	V_{CC}	V
T_A	Operating Temperature	SC−88	−40	+125	°C
		MicroPak−6	−40	+85	
		MicroPak2−6	−40	+85	

ORDERING INFORMATION

Device	Operating Temperature	Top Mark	Packages	Shipping†
NC7WZ14P6X	−40 to +125°C	Z14	6−Lead SC70, EIAJ SC−88, 1.25 mm Wide	3000 / Tape & Reel
NC7WZ14L6X	−40 to +85°C	A9	6−Lead MicroPak, 1.00 mm Wide	5000 / Tape & Reel
NC7WZ14FHX	−40 to +85°C	A9	6−Lead, MicroPak2, 1x1 mm Body, .35 mm Pitch	5000 / Tape & Reel

Reliability Data Summary:

QV DEVICE NAME: NL27WZ14DFT2G
RMS: L85492 / L82712
PACKAGE: SC88

Test	Specification	Condition	Interval	Results
Earlier Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/308
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs	0/308
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260°C, Pre TC, uHAST, HAST for surface mount pkgs only	-	0/924
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/308
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/308
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/308
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-	0/40

QV DEVICE NAME: MC74VHC1G14DFT1G
RMS: S85493
PACKAGE: SC88A

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:

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
NC7WZ14EP6X	NC7WZ14P6X	NL27WZ14DFT2G, MC74VHC1G14DFT1G