Initial Product/Process Change Notification

Document #:IPCN25224X
Issue Date:15 Feb 2023

Title of Change:	Qualification of onsemi Aizu Japan as wafer Fab for ONC25BCD Technology for select products in NCS2007x family
Proposed First Ship date:	21 Jul 2023 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Adrian.Croitoru@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.
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com>
Marking of Parts/ Traceability of Change:	Custom source information will be updated on product label. Product traceability will be identified by encoded date code.
Change Category:	Back Grinding site change, Assembly Change, Wafer Fab Change
Change Sub-Category(s):	Material Change, Manufacturing Site Addition

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
onsemi Aizu, Japan	None
onsemi Carmona, Philippines	
onsemi, ISMF Malaysia	

Description and Purpose:

onsemi would like to inform its customers of qualification of an additional wafer fabrication facility for ONBCD25 technology at onsemi Aizu, Japan for the devices listed in this IPCN, and wire conversion from 0.8mil Au to 1mil Pd-Coated Copper(PCC) on NCS20074 devices. All products listed here will be dual sourced from onsemi Gresham and onsemi Aizu.

There is no change to the orderable part number.

There is no product marking change as a result of this notification.

NCS20071 FAMILY – TSOP5 and SOT553 packages	**From**	**To**
Wafer Fab	onsemi, Gresham, Oregon (US)	onsemi, Gresham, Oregon (US); onsemi, Aizu (Japan)

NCS20074 FAMILY – Soic-14 and TSSOP-14 packages	From	To
Wafer Fab	onsemi, Gresham, Oregon (US)	onsemi, Gresham, Oregon (US) onsemi, Aizu (Japan)
Back Grinding	onsemi, Gresham, Oregon (US)	onsemi, ISMF Seremban
Bond Wire	0.8mil Au	1mil Pd-Coated Copper (PCC)

Qualification Plan:

QV DEVICE NAME: NCS20072DR2G
RMS: O86311
PACKAGE: SOIC-8

Test	Specification	Condition	Interval
High Temperature Operating Life	JESD22-A108	Ta= 125°C, 100 % max rated Vcc	1008 hrs
Early Life Failure Rate	JESD22-A108	Ta= 125°C, 100 % max rated Vcc	48 hrs
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260°C	
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
ESD-HBM	JS001	2000V	
ESD-CDM	JS002	2000V	
Latch-Up, Class II	AEC-Q100-004, JESD78	+/- 100mA	
Electrical Distribution/Thermal Characterization	onsemi DataSheet	Test @ Cold & Room & Hot, Cpk ≥ 1.67	

Estimated date for qualification completion: 31 March 2023

QV DEVICE NAME: NCS20074DR2G
RMS: O86850
PACKAGE: SOIC-14

Test	Specification	Condition	Interval
High Temperature Operating Life	JESD22-A108	Ta= 125°C, 100 % max rated Vcc	1008 hrs
Early Life Failure Rate	JESD22-A108	Ta= 125°C, 100 % max rated Vcc	48 hrs
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260°C	
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Solderability	JSTD002	Ta = 245°C, 5 sec	
ESD-HBM	JS001	2000V	
ESD-CDM	JS002	1000V	
Latch-Up, Class II	AEC-Q100-004, JESD78	+/- 100mA	
Electrical Distribution/Thermal Characterization	onsemi DataSheet	Test @ Cold & Room & Hot, Cpk ≥ 1.67	

Estimated date for qualification completion: 31 March 2023

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
NCS20071SN2T1G	NCS20072DR2G
NCS20071XV53T2G	NCS20072DR2G
TLV274DTBR2G	NCS20074DR2G
TLV274DR2G	NCS20074DR2G
NCS20074DTBR2G	NCS20074DR2G
NCS20074DR2G	NCS20074DR2G

DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCS20071SN2T1G		NCS20072DR2G	NA	
TLV274DTBR2G		NCS20074DR2G	NA	
TLV274DR2G		NCS20074DR2G	NA	
NCS20074DTBR2G		NCS20074DR2G	NA	
NCS20074DR2G		NCS20074DR2G	NA	
NCS20071XV53T2G		NCS20072DR2G	NA	