



Initial Product/Process Change Notification

Document #: IPCN25224Z

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 Changed Material First Ship Date:	30 Nov 2023 or earlier if approved by customer
Current Material Last Order Date:	N/A <i>Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability.</i>
Current Material Last Delivery Date:	N/A <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>
Product Category:	Active components – Integrated circuits
Contact information:	Contact your local onsemi Sales Office or Adrian.Croitoru@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office to place sample order. Sample requests are to be submitted no later than 45 days after publication of this change notification. 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 Vladislav.Hrachovec@onsemi.com
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 6 months prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com> .
Change Category	
Category	Type of Change
Process - Wafer Production	Move of all or part of wafer fab to a different location/site/subcontractor
Process - Assembly	Change of wire bonding

Description and Purpose:

onsemi would like to inform its customers of qualification of a 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 sourced only from onsemi Aizu.

There is no change to the orderable part number.

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

NCV20071 FAMILY – TSOP-5 and SOT553 packages	From	To
Wafer Fab	onsemi, Gresham, Oregon (US)	onsemi, Aizu (Japan)

NCV20074 FAMILY – SOIC-14 and TSSOP-14 packages	From	To
Wafer Fab	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)

Reason / Motivation for Change:	Process/Materials Change
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Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	The device will be qualified and validated based on the same Product Specification. No anticipated impacts.
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Sites Affected:

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

Marking of Parts/ Traceability of Change:	Custom source information will be updated on product label. Product traceability will be identified by encoded date code.
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Reliability Data Summary:

QV DEVICE NAME: NCV20072DR2G
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 May 2023

QV DEVICE NAME: NCV20074DR2G

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 May 2023

Electrical Characteristics Summary:

Electrical characteristics are not impacted.

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](#).

Current Part Number	New Part Number	Qualification Vehicle
NCV20074DR2G	NA	NCV20074DR2G
NCV20074DTBR2G	NA	NCV20074DR2G
NCV274DR2G	NA	NCV20074DR2G
NCV274DTBR2G	NA	NCV20074DR2G
NCV20071XV53T2G	NA	NCV20072DR2G
NCV20071SN2T1G	NA	NCV20072DR2G

Appendix A: Changed Products**PCN#: IPCN25224Z**
Issue Date: Feb 15, 2023

DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCV20074DR2G		NCV20074DR2G	NA	
NCV274DR2G		NCV20074DR2G	NA	
NCV20071SN2T1G		NCV20072DR2G	NA	
NCV20074DTBR2G		NCV20074DR2G	NA	