Final Product/Process Change Notification

Document #:FPCN24820Z
Issue Date:17 Nov 2023

Title of Change:	ACMOS1 and ACMOS2 fab process qualification at onsemi Aizu fab location.
Proposed Changed Material First Ship Date:	24 May 2024 or earlier if approved by customer
Current Material Last Order Date:	N/A *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*.
Current Material Last Delivery Date:	N/A *The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory*
Product Category:	Active components – Integrated circuits
Contact information:	Contact your local onsemi Sales Office or Don.Beeman@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.
Sample Availability Date:	16 Nov 2023
PPAP Availability Date:	17 Dec 2023
Additional Reliability Data:	Contact your local onsemi Sales Office or Vladislav.Hrachovec@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. onsemi will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, 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
Equipment	Production from a new equipment/tool which uses the same basic technology (replacement equipment or extension of existing equipment pool) without change of process.

Description and Purpose:

onsemi would like to inform its customers of qualification of a wafer fabrication facility for ACMOS1/2 technology at onsemi Aizu, Japan for the devices listed in this FPCN.

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.

	From	**To**
Fab Site	onsemi Gresham	onsemi Aizu

Reason / Motivation for Change:	Capacity improvement
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by onsemi in relation to the PCN, associated risks are verified and excluded. No anticipated impacts.

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
onsemi Aizu, Japan	None

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

Reliability Data Summary:

QV DEVICE NAME: NCV2002SN2T1G
RMS: S87406, S90287
PACKAGE: TSOP-6

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
High Temperature Storage Life	JESD22-A103	Ta=150°C	1008 hrs	0/240
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260°C, Pre TC, uHAST, HAST for surface mount pkgs only		
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/240
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
ESD Human Body Model	JS-001	Test @ Room & Hot before/after the stress	1500V	0/3
ESD Charge Device Model	JS-002	Test @ Room & Hot before/after the stress	1000	0/3
Latch Up	JESD78	Dynamic Latch-up Class II; Test @ Room & Hot before/after the stress	LU+>100mA LU->100mA	0/6
Electrical Distribution	onsemi DataSheet	Cpk ≥ 1.67; Test @ Room & Hot & Cold	Electrical	0/90

QV DEVICE NAME: NCV500SN33T1G
RMS: S87403, S87406
PACKAGE: TSOP-5

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
High Temperature Storage Life	JESD22-A103	Ta=150°C	1008 hrs	0/240
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260°C, Pre TC, uHAST, HAST for surface mount pkgs only		
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/240
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240

ESD Human Body Model	JS-001	Test @ Room & Hot before/after the stress	2000V	0/3
ESD Charge Device Model	JS-002	Test @ Room & Hot before/after the stress	1000	0/3
Latch Up	JESD78	Dynamic Latch-up Class II; Test @ Room & Hot before/after the stress	LU+>100mA LU->100mA	0/6
Electrical Distribution	onsemi DataSheet	Cpk ≥ 1.67; Test @ Room & Hot & Cold	Electrical	0/90

QV DEVICE NAME: NCV551SN33T1G
RMS: S87404, S87406
PACKAGE: TSOP-5

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
High Temperature Storage Life	JESD22-A103	Ta=150°C	1008 hrs	0/240
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260°C, Pre TC, uHAST, HAST for surface mount pkgs only		
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/240
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
ESD Human Body Model	JS-001	Test @ Room & Hot before/after the stress	2000V	0/3
ESD Charge Device Model	JS-002	Test @ Room & Hot before/after the stress	1000	0/3
Latch Up	JESD78	Dynamic Latch-up Class II; Test @ Room & Hot before/after the stress	LU+>100mA LU->100mA	0/6
Electrical Distribution	onsemi DataSheet	Cpk ≥ 1.67; Test @ Room & Hot & Cold	Electrical	0/90

QV DEVICE NAME: NCV8690MN33T2G
RMS: S85163, S91007
PACKAGE: DFN6 3x3mm

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
High Temperature Storage Life	JESD22-A103	Ta=150°C	1008 hrs	0/240
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260°C, Pre TC, uHAST, HAST for surface mount pkgs only		
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/240
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
ESD Human Body Model	JS-001	Test @ Room & Hot before/after the stress	2000V	0/3
ESD Charge Device Model	JS-002	Test @ Room & Hot before/after the stress	1000	0/3
Latch Up	JESD78	Dynamic Latch-up Class II;	LU+>100mA	0/6

		Test @ Room & Hot before/after the stress	LU->100mA	
Electrical Distribution	onsemi DataSheet	Cpk ≥ 1.67; Test @ Room & Hot & Cold	Electrical	0/90

QV DEVICE NAME: NCV303LSN45T1G
RMS: S85160, S91007
PACKAGE: TSOP-5

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
High Temperature Storage Life	JESD22-A103	Ta=150°C	1008 hrs	0/240
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260°C, Pre TC, uHAST, HAST for surface mount pkgs only		
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/240
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
ESD Human Body Model	JS-001	Test @ Room & Hot before/after the stress	2000V	0/3
ESD Charge Device Model	JS-002	Test @ Room & Hot before/after the stress	1000	0/3
Latch Up	JESD78	Dynamic Latch-up Class II; Test @ Room & Hot before/after the stress	LU+>100mA LU->100mA	0/6
Electrical Distribution	onsemi DataSheet	Cpk ≥ 1.67; Test @ Room & Hot & Cold	Electrical	0/90

Note: AEC-1pager is attached.

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.

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
NCV8560SN250T1G	N/A	NCV8690MN33T2G
NCV8560SN180T1G	N/A	NCV8690MN33T2G
NCV7101SN1T1G	N/A	NCV2002SN2T1G
NCV663SQ33T1G	N/A	NCV551SN33T1G
NCV662SQ15T1G	N/A	NCV551SN33T1G
NCV563SQ33T1G	N/A	NCV551SN33T1G
NCV562SQ33T1G	N/A	NCV551SN33T1G
NCV551SN50T1G	N/A	NCV551SN33T1G
NCV551SN33T1G	N/A	NCV551SN33T1G
NCV551SN30T1G	N/A	NCV551SN33T1G
NCV551SN25T1G	N/A	NCV551SN33T1G
NCV551SN18T1G	N/A	NCV551SN33T1G
NCV551SN15T1G	N/A	NCV551SN33T1G
NCV303LSN46T1G	N/A	NCV303LSN45T1G
NCV303LSN45T1G	N/A	NCV303LSN45T1G
NCV303LSN44T1G	N/A	NCV303LSN45T1G
NCV303LSN42T1G	N/A	NCV303LSN45T1G
NCV303LSN40T1G	N/A	NCV303LSN45T1G
NCV303LSN34T1G	N/A	NCV303LSN45T1G
NCV303LSN31T1G	N/A	NCV303LSN45T1G
NCV303LSN30T1G	N/A	NCV303LSN45T1G
NCV303LSN29T1G	N/A	NCV303LSN45T1G
NCV303LSN27T1G	N/A	NCV303LSN45T1G
NCV303LSN25T1G	N/A	NCV303LSN45T1G
NCV303LSN20T1G	N/A	NCV303LSN45T1G
NCV303LSN16T1G	N/A	NCV303LSN45T1G
NCV303LSN11T1G	N/A	NCV303LSN45T1G
NCV303LSN09T1G	N/A	NCV303LSN45T1G
NCV301LSN42T1G	N/A	NCV303LSN45T1G

NCV301LSN40T1G	N/A	NCV303LSN45T1G
NCV301LSN28T1G	N/A	NCV303LSN45T1G
NCV300LSN28T1G	N/A	NCV303LSN45T1G
NCV2001SN2T1G	N/A	NCV8690MN33T2G
NCV2001SQ2T2G	N/A	NCV8690MN33T2G
NCV2002SN1T1G	N/A	NCV2002SN2T1G
NCV2002SN2T1G	N/A	NCV2002SN2T1G
NCV2200AMUTBG	N/A	NCV8690MN33T2G
NCV2200SN1T1G	N/A	NCV2002SN2T1G
NCV2200SN2T1G	N/A	NCV2002SN2T1G
NCV2200SQ2T2G	N/A	NCV2002SN2T1G
NCV2202SN2T1G	N/A	NCV2002SN2T1G
NCV300LSN36T1G	N/A	NCV303LSN45T1G
NCV301LSN22T1G	N/A	NCV303LSN45T1G
NCV301LSN33T1G	N/A	NCV303LSN45T1G
NCV303LSN10T1G	N/A	NCV303LSN45T1G
NCV303LSN24T1G	N/A	NCV303LSN45T1G
NCV500SN18T1G	N/A	NCV500SN33T1G
NCV500SN28T1G	N/A	NCV500SN33T1G
NCV500SN33T1G	N/A	NCV500SN33T1G
NCV551SN28T1G	N/A	NCV551SN33T1G
NCV551SN36T1G	N/A	NCV551SN33T1G
NCV553SQ30T1G	N/A	NCV551SN33T1G
NCV562SQ25T1G	N/A	NCV551SN33T1G
NCV563SQ18T1G	N/A	NCV551SN33T1G
NCV571MN10TBG	N/A	NCV551SN33T1G
NCV571MN12TBG	N/A	NCV551SN33T1G
NCV612SQ18T2G	N/A	NCV551SN33T1G
NCV612SQ37T2G	N/A	NCV551SN33T1G
NCV662SQ27T1G	N/A	NCV551SN33T1G
NCV662SQ30T1G	N/A	NCV551SN33T1G
NCV662SQ50T1G	N/A	NCV551SN33T1G
NCV663SQ15T1G	N/A	NCV551SN33T1G
NCV663SQ25T1G	N/A	NCV551SN33T1G
NCV663SQ27T1G	N/A	NCV551SN33T1G

NCV663SQ50T1G	N/A	NCV551SN33T1G
NCV7101SN2T1G	N/A	NCV2002SN2T1G
NCV8560MN150R2G	N/A	NCV8690MN33T2G
NCV563SQ30T1G	N/A	NCV551SN33T1G
NCV571MN09TBG	N/A	NCV551SN33T1G
NCV612SQ30T2G	N/A	NCV551SN33T1G
NCV663SQ28T1G	N/A	NCV551SN33T1G
NCV8560SN130T1G	N/A	NCV8690MN33T2G
NCV8560SN280T1G	N/A	NCV8690MN33T2G
NCV8560SN330T1G	N/A	NCV8690MN33T2G
NCV8560SN350T1G	N/A	NCV8690MN33T2G
NCV8603SN33T1G	N/A	NCV8690MN33T2G
NCV8605MN18T2G	N/A	NCV8690MN33T2G
NCV8605MN28T2G	N/A	NCV8690MN33T2G
NCV8605MN30T2G	N/A	NCV8690MN33T2G
NCV8605MN33T2G	N/A	NCV8690MN33T2G
NCV8605MNADJT2G	N/A	NCV8690MN33T2G
NCV8606MN25T2G	N/A	NCV8690MN33T2G
NCV8606MN30T2G	N/A	NCV8690MN33T2G
NCV8690MN33T2G	N/A	NCV8690MN33T2G
NCV8560MN330R2G	N/A	NCV8690MN33T2G

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Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCV8560SN250T1G		NCV8690MN33T2G		
NCV7101SN1T1G		NCV2002SN2T1G		
NCV663SQ33T1G		NCV551SN33T1G		
NCV662SQ15T1G		NCV551SN33T1G		
NCV563SQ33T1G		NCV551SN33T1G		
NCV562SQ33T1G		NCV551SN33T1G		
NCV551SN50T1G		NCV551SN33T1G		
NCV551SN33T1G		NCV551SN33T1G		
NCV551SN30T1G		NCV551SN33T1G		
NCV551SN25T1G		NCV551SN33T1G		
NCV551SN18T1G		NCV551SN33T1G		
NCV551SN15T1G		NCV551SN33T1G		
NCV303LSN45T1G		NCV303LSN45T1G		
NCV303LSN44T1G		NCV303LSN45T1G		
NCV303LSN42T1G		NCV303LSN45T1G		
NCV303LSN40T1G		NCV303LSN45T1G		
NCV303LSN34T1G		NCV303LSN45T1G		
NCV303LSN31T1G		NCV303LSN45T1G		
NCV8560SN350T1G		NCV8690MN33T2G		
NCV8603SN33T1G		NCV8690MN33T2G		
NCV8605MN18T2G		NCV8690MN33T2G		
NCV8605MN28T2G		NCV8690MN33T2G		
NCV8605MN30T2G		NCV8690MN33T2G		
NCV8605MN33T2G		NCV8690MN33T2G		
NCV8605MNADJT2G		NCV8690MN33T2G		
NCV8606MN25T2G		NCV8690MN33T2G		
NCV8606MN30T2G		NCV8690MN33T2G		
NCV8690MN33T2G		NCV8690MN33T2G		
NCV8560MN330R2G		NCV8690MN33T2G		
NCV303LSN30T1G		NCV303LSN45T1G		
NCV303LSN29T1G		NCV303LSN45T1G		
NCV303LSN27T1G		NCV303LSN45T1G		
NCV303LSN25T1G		NCV303LSN45T1G		
NCV303LSN20T1G		NCV303LSN45T1G		
NCV303LSN16T1G		NCV303LSN45T1G		
NCV303LSN11T1G		NCV303LSN45T1G		
NCV303LSN09T1G		NCV303LSN45T1G		
NCV301LSN42T1G		NCV303LSN45T1G		
NCV301LSN40T1G		NCV303LSN45T1G		
NCV301LSN28T1G		NCV303LSN45T1G		
NCV300LSN28T1G		NCV303LSN45T1G		
NCV2001SN2T1G		NCV8690MN33T2G		
NCV2001SQ2T2G		NCV8690MN33T2G		
NCV2002SN1T1G		NCV2002SN2T1G		
NCV2002SN2T1G		NCV2002SN2T1G		
NCV2200AMUTBG		NCV8690MN33T2G		
NCV2200SN1T1G		NCV2002SN2T1G		
NCV2200SN2T1G		NCV2002SN2T1G		
NCV2200SQ2T2G		NCV2002SN2T1G		
NCV2202SN2T1G		NCV2002SN2T1G		
NCV300LSN36T1G		NCV303LSN45T1G		
NCV8560SN180T1G		NCV8690MN33T2G		
NCV301LSN33T1G		NCV303LSN45T1G		
NCV303LSN10T1G		NCV303LSN45T1G		
NCV301LSN22T1G		NCV303LSN45T1G		
NCV500SN18T1G		NCV500SN33T1G		
NCV303LSN24T1G		NCV303LSN45T1G		
NCV500SN28T1G		NCV500SN33T1G		
NCV500SN33T1G		NCV500SN33T1G		
NCV553SQ30T1G		NCV551SN33T1G		

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Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCV551SN36T1G		NCV551SN33T1G		
NCV562SQ25T1G		NCV551SN33T1G		
NCV563SQ18T1G		NCV551SN33T1G		
NCV662SQ50T1G		NCV551SN33T1G		
NCV663SQ15T1G		NCV551SN33T1G		
NCV571MN10TBG		NCV551SN33T1G		
NCV663SQ25T1G		NCV551SN33T1G		
NCV663SQ27T1G		NCV551SN33T1G		
NCV571MN12TBG		NCV551SN33T1G		
NCV663SQ50T1G		NCV551SN33T1G		
NCV612SQ18T2G		NCV551SN33T1G		
NCV612SQ37T2G		NCV551SN33T1G		
NCV662SQ27T1G		NCV551SN33T1G		
NCV7101SN2T1G		NCV2002SN2T1G		
NCV8560MN150R2G		NCV8690MN33T2G		
NCV662SQ30T1G		NCV551SN33T1G		
NCV571MN09TBG		NCV551SN33T1G		
NCV612SQ30T2G		NCV551SN33T1G		
NCV663SQ28T1G		NCV551SN33T1G		
NCV8560SN330T1G		NCV8690MN33T2G		
NCV8560SN130T1G		NCV8690MN33T2G		
NCV8560SN280T1G		NCV8690MN33T2G		