



# Final Product/Process Change Notification

Document #:FPCN21520XH

Issue Date: 11 Oct 2024

<b>Title of Change:</b>	Qualification of onsemi Aizu as an additional Wafer Fab facility for ONC25 Technology - NCP176 & NCP177 family.	
<b>Proposed First Ship date:</b>	30 Jan 2025 or earlier if approved by customer	
<b>Contact Information:</b>	Contact your local onsemi Sales Office or <a href="mailto:Milos.Dvorak@onsemi.com">Milos.Dvorak@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:Vladislav.Hrachovec@onsemi.com">Vladislav.Hrachovec@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>	The affected products will be identified with date code and custom source	
<b>Change Category:</b>	Wafer Fab Change	
<b>Change Sub-Category(s):</b>	Manufacturing Site Addition	
<b>Sites Affected:</b>		
<b>onsemi Sites</b>	<b>External Foundry/Subcon Sites</b>	
onsemi Aizu, Japan	None	

**Description and Purpose:**

The onsemi Aizu Wafer Fab located in Aizuwakamatsu, Japan has been qualified to process the ONC25 CMOS process.

The exact same process technology has been transferred as is currently running in the onsemi wafer fab located at Gresham, Oregon, USA.

Tool sets are different but the exact same masking layers and steps are being used in the onsemi Aizu.

This is a capacity expansion to supplement the existing onsemi wafer fab.

The parts being qualified are dual sourced and may be processed at either wafer fab in the future depending on capacity requirements.

There is no change to the orderable part number. There is no product marking change as a result of this change.

Site / Location	Current:	Proposed:
<b>Wafer Fab</b>	onsemi Gresham, North America   United States   Oregon	onsemi Aizu, Asia   Japan   Fukushima onsemi Gresham, North America   United States   Oregon



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## Reliability Data Summary:

QV DEVICE NAME: NCV8170AXV300T2G

RMS: S33743

PACKAGE: SOT-563

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs	0/231
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2400
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260°C, Pre TC, uHAST, HAST for surface mount pkgs only		0/all
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/231
Highly Accelerated Stress Test	JESD22-A110	110°C, 85% RH, 18.8psig, bias	264 hrs	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231

## 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](#).

Part Number	Qualification Vehicle
NCP176AMX120TCG	NCV8170AXV300T2G
NCP176AMX180TCG	NCV8170AXV300T2G
NCP176AMX330TCG	NCV8170AXV300T2G
NCP176BMX100TCG	NCV8170AXV300T2G
NCP177AMX125TCG	NCV8170AXV300T2G
NCP177AMX180TCG	NCV8170AXV300T2G
NCP177AMX330TCG	NCV8170AXV300T2G
NCP177BMX070TCG	NCV8170AXV300T2G
NCP177BMX110TCG	NCV8170AXV300T2G
NCP177BMX330TCG	NCV8170AXV300T2G
NCP177BMX180TCG	NCV8170AXV300T2G
NCP177BMX150TCG	NCV8170AXV300T2G
NCP177BMX135TCG	NCV8170AXV300T2G



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NCP177BMX125TCG	NCV8170AXV300T2G
NCP177AMX120TCG	NCV8170AXV300T2G
NCP177AMX090TCG	NCV8170AXV300T2G
NCP176BMX280TCG	NCV8170AXV300T2G
NCP176BMX180TCG	NCV8170AXV300T2G
NCP176BMX120TCG	NCV8170AXV300T2G