



## Initial Product/Process Change Notification

Document #: IPCN25591X

Issue Date: 16 Aug 2023

<b>Title of Change:</b>	Additional wafer fabrication sites for the Eco SWITCH family of products using ONC25HV technology for the controller die at onsemi Aizu facility and using T6 technology for the FET die at onsemi East Fishkill facility.	
<b>Proposed First Ship date:</b>	01 Feb 2024 or earlier if approved by customer	
<b>Contact Information:</b>	Contact your local onsemi Sales Office or Don Birch < <a href="mailto:Don.Birch@onsemi.com">Don.Birch@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>Type of Notification:</b>	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 < <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a> >	
<b>Marking of Parts/ Traceability of Change:</b>	There is no change to the part marking or the traceability code.	
<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	Global Foundries East Fishkill, New York, United States	
<b>Description and Purpose:</b>		
This IPCN is to announce the pending qualifications of additional wafer fabrication sites for the eco SWITCH family of products. The ONC25HV technology is being qualified at onsemi Aizu facility located in Aizu, Japan as an additional site for the controller die. The T6 technology is being qualified at onsemi East Fishkill facility located in East Fishkill, US as an additional site for the FET die.		
	<b>From</b>	<b>To</b>
<b>Fab Site – Controller Die</b>	onsemi Gresham, US	onsemi Gresham, US or onsemi Aizu, Japan
<b>Fab Site – FET Die</b>	onsemi Aizu, Japan	onsemi Aizu, Japan or onsemi East Fishkill, US
<b>Wafer Size – FET Die</b>	200 mm	200 mm at Aizu, 300 mm at East Fishkill
There is no product marking change as a result of this change.		

## Qualification Plan:

QV DEVICE NAME: NCP45790IMN24RTWG, NCP45770IMN24TWG (FET Only)

RMS: TBD

PACKAGE: DFN14 4X4

Test	Specification	Condition	Interval
Intermittent Op Life (FET Only)	MIL-STD-750 mtd 1037	Ta = +25°C, delta Tj =100°C max, 3.5 min = Ton = Toff	15,000 cyc
High Temperature Gate Bias (FET Only)	JESD22-A108	Tj = 150°C (Max rate for FET), bias = 100% of rated V	1008 hrs
High Temperature Reverse Bias (FET Only)	JESD22-A108	Tj = 150°C (Max rate for FET), bias =100% of rated V	1008 hrs
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL 3 @ 260 °C	
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	500 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	264 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Electrostatic Discharge Human Body Model	JS-001	Test up to 3kV 3 parts per V-step	2kV
Electrostatic Discharge Charged Device Model	JS-002	Test up to 750V 3 parts per V-step	500V
Latch Up	JESD78 Class II	Tj max, +/-100mA, 1.5x VDD	100mA

Estimated date for qualification completion: 20 Oct 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
NCP45790IMN24RTWG	NCP45790IMN24RTWG
NCP45780IMN24RTWG	NCP45790IMN24RTWG
NCP45770IMN24TWG	NCP45790IMN24RTWG
NCP45760IMN24RTWG	NCP45790IMN24RTWG
NCP45750IMN24TWG	NCP45790IMN24RTWG