Initial Product/Process Change Notification

Document #:IPCN26053XB
Issue Date:05 Jun 2024

Title of Change:	Wafer Fab Site Transfer from LA Semi Fab10 Pocatello to onsemi Gresham for NCN5110MNTWG, NCN5121MNTWG, NCN5130MNTWG, NCN5150MNTWG, and NCN5151MNTWG.
Proposed First Ship date:	31 Jul 2025 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Jonathan.Bass@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:	No change to marking / Changed material may be identified by date code
Change Category:	Wafer Fab Change
Change Sub-Category(s):	Manufacturing Site Transfer

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
onsemi, Gresham United States	None

Description and Purpose:

onsemi would like to notify its customers of its intent to qualify NCN5110MNTWG, NCN5121MNTWG, NCN5130MNTWG, NCN5150MNTWG, and NCN5151MNTWG at our onsemi Gresham wafer FAB. The qualification enables expanded capacity for this technology and ensures business continuity.

In addition to fab site transfer, onsemi intends to implement a minor design tweak to improve communication robustness in a highly loaded KNX bus vs NCN51xx. This will be achieved by making changes in the receiver detection threshold for the start of the active pulse (lowered from −0.45 V (typ.) to −0.61 V (typ.)), the detection threshold for the end of the active pulse (lowered from −0.2 V (typ.) to −0.38 V (typ.)) and the blanking time (increased to 24 µs).

Sample date/FPCN: April 2025

Please work with your local sales team to provide the bridge quantity required until the production shipments from Gresham site begin. The sales team will provide a quote for the bridge quantity order with an expectation that an NCNR PO is placed within 30 days of receipt of IPCN.

onsemi plans to begin shipping Gresham product 3 months after FPCN is issued. If more time is needed to qualify, discuss with your local sales team.

		From	To
Fab Site		LAS Pocatello Fab10, US	onsemi Gresham, US
Design Modification NCN51110MNTWG NCN5121MNTWG NCN5130MNTWG	Detection threshold for the start of the active pulse	-0.45 V (typ)	-0.61 V (typ)
	Detection threshold for the end of the active pulse	-0.2 V (typ)	-0.38 V (typ)

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

Qualification Plan:

QV DEVICE NAME: NCN5150MNTWG
RMS: TBD
PACKAGE: QFN 20L

Test	Specification	Condition	Interval
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
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, unbiased	96 hrs

QV DEVICE NAME: NCN5130MNTWG
RMS: TBD
PACKAGE: QFN 40L

Test	Specification	Condition	Interval
High Temperature Storage Life	JESD22-A103	Ta= 125°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL 3 @ 260 °C	
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	500 cyc
Temperature Humidity Unbiased	JESD22-A101	85°C, 85% RH, unbiased	504 hrs

QV DEVICE NAME: NCV78247DQ0R2G
RMS: O78164
PACKAGE: SSOP 36L

Test	Specification	Condition	Interval
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= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	110°C, 85% RH, bias	264 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	110°C, 85% RH, unbiased	264 hrs

Estimated date for qualification completion: 11 April 2025

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
NCN5151MNTWG	NCN5150MNTWG / NCV78247DQ0R2G

NCN5150MNTWG	NCN5150MNTWG / NCV78247DQ0R2G
NCN5121MNTWG	NCN5130MNTWG / NCV78247DQ0R2G
NCN5110MNTWG	NCN5130MNTWG / NCV78247DQ0R2G
NCN5130MNTWG	NCN5130MNTWG / NCV78247DQ0R2G